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CURRENT CHANGES IN TRUNKLINE COMPETITION

BY GILBERT L. BATES[1]

Legal Advisor to Vice Chairman Joseph P. Adams, Civil Aeronautics Board; B.A., Wesleyan University, 1936; LL.B., National University Law School, 1941; Member of D. C. Bar. *Formerly*, Research Fellow, Harvard Graduate School of Business Administration 1947-1949; Assistant Director, Economic Research, Capital Airlines, Inc., 1942-1947.

RECENT decisions of the Civil Aeronautics Board have sharply focused the attention of the air transportation industry upon airline competition. Other Board decisions to be issued in 1956 will unquestionably maintain the subject of competition among our domestic air carriers as one of paramount importance in the minds of everyone directly or indirectly concerned with air transportation. And as the trunklines — particularly those other than the "Big Four" — activate their newly authorized route grants over the next several months, many of them with aircraft fleets which suddenly are inadequate both as to size and type, they must wrestle with a complex of competitive problems, problems which have not arisen before, in their present form at least, and which have not been faced before by many of the carrier managements now confronted by them.

It is the purpose of this article to establish the fact that the extent of effective competition among our domestic trunklines remained relatively static from 1947 through 1954 — relative to its tremendous growth in the seven years prior to 1947 — and more importantly, relative also to the great increase in effective competition which appears to be inevitable in 1956 and future years. Significant characteristics of the newly intensified competitive system are then to be pointed out, emphasizing particularly the increasing proportion of principal airline markets served, not by one or two airlines, but by three, four and five of them — all competing, at least potentially, on an effective basis. The dangers implicit in the increased extent of this multi-carrier competition will then be mentioned — dangers which were pointed out and analyzed some seven years ago in another, more thorough

[1] The opinions herein expressed are strictly those of the author and in no way reflect the views of the Civil Aeronautics Board or its sanction thereof.

study[2] which the writer was privileged to co-outhor, and which were dealt with at that time from the standpoint of airline services and prices offered United States travelers and also as to the effect of such competition upon airline earnings.

The writer presents this material in an effort to provide a method by which a most important problem can be better understood and measured; rather than with any idea of predicting for any carrier or for the industry as a whole what effect the newly authorized competition will have. The recent new route grants authorized by the Board, together with others now pending before it, are so sweeping in their effect that the most intelligent planning and management are called for on the part of both the industry and the Board itself, if the maximum benefits possible are to accrue to the public. Basic to such planning efforts is a continuing and accurate analysis of the many and diverse competitive relationships among all our trunklines. It is hoped that this study, or perhaps a more thorough one provoked by it, may be of help in such analyses.

The analysis presented here is concerned almost entirely with the principal airline "markets," or city pairs, served by each domestic trunkline carrier. It has been confined to those relatively few markets for each trunkline which in the aggregate have accounted for at least 50 percent of each carrier's passenger miles during certain indicated periods. This has been done, of course, since any airline management plans, equips and operates with its principal revenue producing markets uppermost in mind.

The primary sources for the data presented in this article are first, "Airline Competition," published by the Harvard Business School in 1949; and secondly, a report prepared in October 1955, by the Civil Aeronautics Board's Office of Carrier Accounts and Statistics, entitled "Competition Among Domestic Trunk Air Carriers" and published in December 1955. The latter report is highly recommended to anyone interested in competition among our carriers and is particularly significant in that it is the first such study published by the Board's staff in this very important field. The value of this report both to the industry and the Board and of the IBM tabulations from which it was derived will undoubtedly be apparent and should insure its continued preparation, at least once each year.

As generally explained in the technical notes at the end of this article (Appendix C) there are differences in the type and extent of airline passenger travel covered by these two primary sources—"Airline Competition," on the one hand, and the Board's staff study of trunkline competition on the other. By using the basic, detailed IBM tabulations themselves, rather than the summaries of the staff study as published, the writer has attempted to establish as high a degree of

[2] "Airline Competition," by Frederick W. Gill and Gilbert L. Bates, 1949. Excerpts reprinted by permission from Division of Research, Graduate School of Business Administration, Harvard University, Boston.

comparability as possible between the two sources. This was necessary in order that changes in competitive relationships from 1947 to 1954 could be determined. Complete comparability of these two sources was not attained, but the effort was sufficiently successful, it is felt, so that the conclusions drawn are valid.

The Last Seven-Year Period of Static Trunkline Competition

In order that the reader may have a clear understanding of the continuing importance of passenger travel to our domestic trunklines, and further, that he may appreciate the fact that the principal sources of trunkline revenues are concentrated in very few markets, these two points will be touched on before discussing competitive relationships in the trunkline industry.

Importance of Passenger Revenue

Passenger revenues have continued to comprise the predominant revenue source for the domestic trunklines. As Appendix A indicates, for the 13 domestic trunklines in the year ended June 30, 1955, passenger revenues accounted for 93.2 percent of total non-mail transport revenues for all domestic trunklines. Similar percentages for earlier pre-war and post-war years were 93.6 percent for the trunks in the 1939-1941 period and 92.39 percent for the trunkline industry in the 1946-1948 period.[3] Passenger traffic and revenues therefore have always been and continue to be the controlling source of revenue for the trunkline industry.

Furthermore, as shown by the appendix table, passenger revenues account for almost as important a share of *all* trunkline, non-subsidy revenues, approximately 91 percent in the year ended June 30, 1955.

Market Concentration

Despite the sweeping changes which have taken place since the 1947-1948 period in trunkline operations relative to traffic volumes carried, equipment operated and subsidy mail pay eliminated, the following table indicates that trunkline air transportation continues to be characterized by a concentration into very few markets of the carriers' most significant sources of revenue.

The table indicates that whereas the average trunkline among the 16 in existence in 1940 and 1947 derived half of its passenger revenue from only six to ten city pairs or airline markets, this number had increased to approximately 15 in 1954. In that year, the average of the Big Four carriers was approximately 21 markets whereas that for the smaller trunklines was approximately 12. In light of the tremendous increase in passenger traffic movement over the domestic trunkline systems in the last seven years, this table demonstrates that the major sources of airline revenue remain surprisingly few in number.

[3] "Airline Competition," *supra*, page 36, exhibit 1.12.

TABLE 1 — NUMBER MARKETS GENERATING FIFTY PERCENT OF TRUNKLINE REVENUES

*Base Carrier**	*September 1940*	*September 1947*	*September 1954*
Big Four			
American	14	23	20
United	13	18	16
Eastern	8	11	35
TWA	8	10	15
Average	10.8	15.5	21.5
Other Trunklines			
Delta	7	7	20
(C&S)	3	9	
Capital	5	15	29
Northwest	8	10	9
National	4	2	3
Braniff	11	16	26
(MCA)	4	11	
Western	2	4	6
(Inland)	5	5	
Continental	5	6	7
Northeast	3	5	10
Colonial	1	1	2
Average	4.8	7.6	12.4
Trunkline Average	6.3	9.6	12.2

* In order of domestic non-subsidy transportation revenues, year ended June 30, 1955. Further trunkline listings will be in the same order. See Appendix D for listing of markets by carrier.

An examination of the table, however, when made with a knowledge of the basic data studied and when considered in light of the fact that the number of trunklines has declined from 16 in the earlier periods to 13 for the year 1954, supports the conclusion that the number of principal city pairs shown is, if anything, overstated. This is true, of course, since as pointed out in the technical notes (Appendix C), the passenger traffic included in the basic data for September 1954 was not as complete as that included in the airline competition study for the months of September 1940 and September 1947. The combination of six trunkline carriers since 1947 into three presently existing trunks—Delta, Braniff and Western—would in and of itself tend to increase for those carriers the number of major markets for the new systems.

In the case of three trunklines—American, United and Northwest—the number of major markets (those accounting for 50 percent of passenger revenues during the September 1954 survey period) had actually *declined* despite the approximate threefold increase in passenger traffic and revenue experienced by these carriers since 1947. In the case of six other trunklines—TWA, National, Western, Continental, Northeast and Colonial—the increase in number of major markets has

been relatively slight when considered in light of their substantial passenger growth. Even in September 1954 TWA's major markets totaled only 15 and for the other five named carriers the largest number was ten. The trunkline air transportation industry, therefore, has always been and continues to be primarily dependent upon relatively few numbers of major revenue producing markets or city pairs.

The ensuing discussion will be confined principally to a study of the competitive relationships among these domestic trunkline carriers in their relatively few major markets. No attempt has been made in this study to evaluate the significance of the additional competition represented by the nonscheduled carriers which the Civil Aeronautics Board has recently denominated as Supplemental Air Carriers. That such carriers may be an effective competitive source in the future is of course a possibility, but in the absence of passenger origin and destination data for them, it has been impossible to include them in this analysis.

Effective Competition in Major Markets

For purposes of this study the term "effective competition" is used in a manner consistent with its use in the airline competition study published by the Harvard Business School in 1949.[4] In that study the point was made at the outset that airline routings or services could be deemed competitive in several senses, depending on one's point of view, but that to be *effectively* competitive the routings or services must have actually had a demonstrable effect upon traffic carried or airline services rendered. Specifically, as to effective competitive routings, the following appears on page 23 of "Airline Competition":

> ". . . For such classification purposes an effective competitive routing was designated as one which carried 10% or more of the passengers moving via the most heavily traveled routing.[3]
>
> "[3] This 10% rule, while admittedly arbitrary, was adopted by the authors after extensive discussion with leading airline traffic and sales officials. A 10% participation by a competitor was felt to be the minimum participation necessary to constitute effective competition from the standpoint of influencing a competitor's service or rates under normal conditions."

The present study adopts this concept since it has gained in recent years at least some acceptance by the airline industry and the Civil Aeronautics Board in various route and rate proceedings.

With this definition of effective competition in mind, there are a variety of analytical methods which could be used to advantage in

[4] "Airline Competition," *supra*, pages 15, 16 and 23. The following discussion of competitive relationships among the trunk carriers is confined to the actual passenger traffic of each carrier as reported in the various CAB traffic surveys mentioned. It is recognized that these passenger figures resulted not only from varying degrees of management sales efficiency but also from differences among the trunks as to the many "determinants" of airline service. The importance of the other factors is, of course, recognized, but the scope of this article did not permit a full discussion of them. For such a discussion, relative to the 1940-48 period, see "Airline Competition," *supra*, Chapter 5, page 160.

describing competitive relationships among our domestic trunkline carriers in the recent and more distant past. The Board's staff in its recently released study of trunkline competition has used several interesting and valuable analytical techniques, but that study dealt only with passenger traffic movement in September 1954. Since the present study is concerned with competition in not only that month, but in earlier months, seven and fourteen years before, techniques somewhat different than those used by the Board's staff are used here.

The first and perhaps the most obvious comparison to be made shows the extent to which each trunkline's major market passenger miles were subject to effective competition.

TABLE 2 — PERCENT OF EACH TRUNKLINE'S PASSENGER MILES IN MAJOR MARKETS SUBJECT TO EFFECTIVE COMPETITION

Base Carrier	*September 1940*	*September 1947*	*September 1954*
American	41.3%	75.9%	81.0%
United	58.1	86.7	89.0
Eastern	22.4	65.2	56.5
TWA	76.2	82.0	83.9
Delta	N.C.	68.0	45.0
(C&S)	(38.6)	(34.3)	
Capital	N.C.	61.8	68.7
Northwest	34.1	41.6	59.4
National	23.2	100.0	100.0
Braniff	31.3	58.6	45.9
(MCA)	(N.C.)	(N.C.)	
Western	16.2	68.6	69.4
(Inland)	(N.C.)	(38.9)	
Continental	N.C.	12.9	9.4
Northeast	N.C.	47.1	11.7
Colonial	N.C.	N.C.	100.0

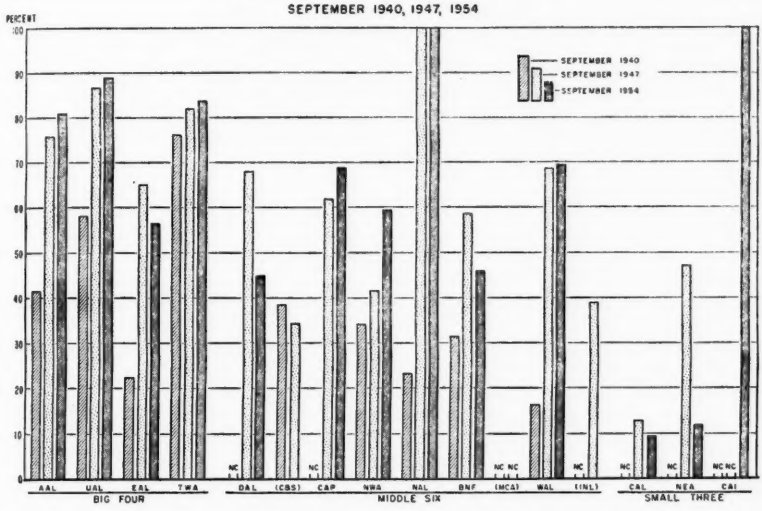
N.C. No Competition

As shown by this table and its accompanying Chart 1, in September 1954, *all* of National's and Colonial's principal revenue producing markets were subject to effective competition from other trunklines. American, United and TWA were next in order of percentage of principal markets' passenger miles effectively competed for and the other trunklines had somewhat lesser competitive problems, with Continental showing less than 10 percent of its major market passenger miles effectively competed for.

The extent of effective competition in principal markets has increased somewhat for most carriers in the last seven-year period; but it is equally true that the increase has not been nearly as great in the last seven years as it was from 1940 to 1947. In this earlier seven-year period only four of the 16 trunkline carriers experienced either no increase in effective competition or a relatively slight increase. Five carriers—Delta, Capital, Inland, Continental and Northeast—which had,

CHART 1.

EFFECTIVE COMPETITION
IN MAJOR TRUNKLINE MARKETS
SEPTEMBER 1940, 1947, 1954



in 1940, experienced no effective competition, were subjected by September 1947 to a substantial degree of competition in their principal markets. Other trunkline carriers had in this first seven-year period experienced similarly increasing competitive problems.

From September 1947 to September 1954, however, the extent of effective competition, as measured merely by this first yardstick, did not become significantly more intensified. It may therefore be concluded that merely as to importance of markets exposed to effective competition, our domestic trunklines from 1940 to 1947 saw a substantial increase but that in the next seven-year period the situation changed only in minor degree.

Competitive Ratio Comparison

Aside from analyzing the mere *exposure* in their principal markets of our trunk carriers to effective competition, it is of course important for any competitive study to indicate how *effectively* each of the trunk carriers has been able to cope with its competitors in its main markets. One method of measuring each carrier's effectiveness in meeting its competitive problems is by use of a "competitive ratio" comparison. This is the ratio of the passenger miles carried by all competitors in all of a carrier's main markets to the passenger miles of that carrier (called the "base" carrier) in such markets.

This means that if in a given base carrier's principal markets its competitors have generated more traffic than has the base carrier, then that carrier's competitive ratio would be more than one. If, on the

other hand, either because the base carrier had relatively few competitive markets or because it generated considerably more traffic in its principal markets than did its competitors, then its competitive ratio would be less than one. And of course, if a base carrier in all its principal markets succeeded in carrying 90 percent or more of the total passenger traffic, its competitive ratio would be zero.

Table 3 and Chart 2 show the competitive ratios for each of the domestic trunkline carriers for the survey months analyzed in 1940, 1947 and 1954.

TABLE 3 — COMPETITIVE RATIO COMPARISON[1]

Base Carrier	*September 1940*	*September 1947*	*September 1954*
American	0.64	0.96	0.98
United	0.72	1.04	1.16
TWA	0.88	1.50	1.47
Eastern	0.13	0.40	0.57
Delta	0.23[2]	0.49[2]	0.52
Capital	0.00	1.21	1.62
Northwest	0.27	0.50	0.63
National	0.10	2.34	1.08
Braniff	0.48[3]	0.34[3]	0.55
Western	0.05[4]	1.39[4]	1.45
Continental	0.00	0.02	0.01
Northeast	0.00	2.76	20.41
Colonial	0.00	0.00	0.38

[1] The ratio of passenger miles generated by competitors in a base carrier's principal markets to the passenger miles generated by the base carrier in those markets.

[2] Delta and Chicago and Southern combined.

[3] Braniff and Mid-Continent combined.

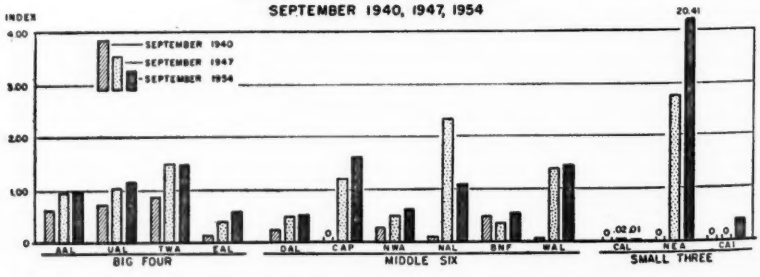
[4] Western and Inland combined.

CHART 2.

COMPETIVE RATIO COMPARISON

TRUNKLINE CARRIERS

SEPTEMBER 1940, 1947, 1954



In September 1954, Continental and Colonial with very low ratios are at one extreme, indicating their relative freedom from effective competition; while Capital, TWA and Western with high competitive

ratios are at the other end, indicating that these three carriers, in terms of this index, had the most serious competitive problem.[5]

As to the change in competitive ratios from 1940 to 1947 as compared with such change from 1947 to 1954, the table and chart indicate that the greatest general increase in ratios took place during the first seven-year period, with relatively little change occurring in the last seven years. On the basis of this competitive ratio comparison, therefore, it can again be concluded that the extent and significance of airline competition increased considerably more in the seven years preceding 1947 than in the seven-year period after that year.

The "Multiple Carrier" Competitive Problem

Aside from the two competitive aspects already covered—the percent of each trunkline's principal markets served competitively and the competitive ratios of each trunkline carrier—a third aspect worth analyzing is the extent to which each trunkline air carrier must cope with *more than one* effective competitor in its principal revenue producing markets.

Particularly in light of recent Board decisions which have substantially expanded the route systems of many of our domestic trunkline carriers, it is important to understand how great a proportion of each trunkline's business is generated in competition with more than a single effective competitor. If, for example, in the case of trunkline "A" its principal markets are exposed in substantial degree to effective competition and if, despite that substantial exposure, trunkline A's competitive ratio is low, a significant conclusion is, of course, that trunkline A has been highly successful in its competitive efforts. It is of even greater significance, however, if trunkline A is similarly successful where it has been faced in most of its main markets by not only one, but two or three effective competitors.

It is this "multiple carrier" type of competition which was discussed at some length in the 1949 competitive study "Airline Competition." As will be shown later, it is also this type of competition which recent decisions of the Civil Aeronautics Board have greatly expanded in three large new route proceedings and which may be even further extended in other significant new route proceedings now pending.[6]

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[5] In terms of this one index, Northeast Airlines appears to have by far the greatest competitive problem with a ratio considerably greater than any other trunkline. It should be borne in mind, however, that this high ratio is due to the fact that Northeast was overwhelmed by its competitors in its *only* competitive market—New York/Boston—and that that one competitive market accounted for only 12 percent of its revenue passenger miles in its principal airline markets. For this reason, Northeast's very high competitive ratio is misleading.

[6] *New York-Chicago Service Case*, Docket 986 *et al.*, Order Serial No. E-9737; *Service to Denver*, Docket 1841 *et al.*, Order Serial No. E-9735 and E-9759; *Additional Northeast-Southwest Service Case*, Docket No. 2355 *et al.*, Order Serial No. E-9758; pending cases include the *New York-Florida Case*, Docket No. 3051 and the *Great Lakes-Southeast Service Case*, Docket No. 2396 *et al.*

TABLE 4 — EXTENT OF "MULTIPLE CARRIER" COMPETITION—SEPTEMBER 1954

	Base Carrier's Passenger Miles in Principal Competitive Markets—September 17-30, 1954			
Base Carrier	*Total Competitive Passenger Miles (000)*	*Percent Distribution by Number of Competitors**		
		Two Competitors	*Three Competitors*	*Four Competitors*
American	59,413	26.0%	71.0%	3.0%
United	62,780	39.2	60.8	0
Eastern	27,670	96.8	3.2	0
TWA	44,777	33.3	66.7	0
Delta	6,583	100.0	0	0
Capital	10,621	71.2	14.6	14.2
Northwest	9,870	81.2	9.1	9.7
National	10,641	100.0	0	0
Braniff	4,874	100.0	0	0
Western	6,198	32.9	67.1	0
Continental	344	100.0	0	0
Northeast	267	0	100.0	0
Colonial	2,234	100.0	0	0

* Including the base carrier as one competitor.

As shown by the table, American, United and TWA of all carriers, had by far the greatest competitive problem in terms of multiple carrier competition in September 1954. Western and Northeast appear also to have a significant multiple carrier competitive problem but the smaller proportion of the principal markets of these carriers which were subject to effective competition of any kind clearly excludes them from comparison in these terms with American, United and TWA.[7] The trunkline carriers having no multi-carrier competitive problem in September 1954 were Delta-C&S, National, Braniff, Continental and Colonial, while Eastern's problem in this area was negligible (only 3.2 percent of Eastern's competitive passenger miles were of the multiple carrier type).

An additional table, Appendix B, lists the three or more competitor markets for each trunkline and the percent of each carrier's competitive market passenger mile total in such multiple carrier markets in 1954. A comparison of the listing in Appendix B with a similar list for September 1947[8] demonstrates that for the trunks as a whole the multi-carrier competitive problem remained practically unchanged from 1947 through 1954. For example, in September 1954, American Airlines had two *fewer* multi-carrier competitive markets than in 1947. For many of the trunks there was no increase whatsoever in their number of multiple carrier competitive markets and further. for Eastern, Northwest, Capital and Western, there was only one more multiple carrier market in 1954 than in 1947. This very slight increase

[7] See Table 2.
[8] See "Airline Competition," *supra*, pp. 48-50, Exhibit 1.16.

for these four carriers is of practically no significance, of course, in light of the increase in the total number of their principal revenue producing markets—particularly in the case of Eastern and Capital. A reasonable overall conclusion, therefore is that there was no significant change in the trunkline multi-carrier competitive problem from 1947 to 1954.

Future Competitive Problems

Recent Operating Results

The foregoing discussion has indicated that during the seven-year period prior to 1955, the extent and intensity of competition among our domestic trunklines, when measured in several ways, did not increase, but remained practically static. In other terms, however, airline operating results have been anything but static. Trunkline earnings and profits increased substantially as passenger traffic volumes mounted steadily each year, beginning in 1949. Despite the introduction by all trunklines of substantial numbers of larger, faster aircraft from 1949 on, and in the face of declining average passenger fare yields, the trunklines maintained sufficiently high passenger load factors so that, with adequate cost controls, operating results were favorable during the 1949-1955 period.

A few comparisons between the 1947-1948 "depression" years of domestic air transport and the year ended June 30, 1955, will point up the extent to which conditions improved for our domestic trunkline industry. The net worth of the trunks increased some 115 percent from about $180,000,000 to more than $390,000,000. Total invested capital increased from just over $320,000,000 to more than $575,000,000 (or more than 75 percent), while the ratio of debt to total capital fell from some 43 percent to approximately 32 percent. In 1947 the trunklines reported a net operating *loss* after taxes and interest of some $23,500,000 while for the fiscal year 1955, they reported a *profit* of more than $65,000,000. From 1947-1948 to fiscal 1955 trunkline nonmail transportation revenue per revenue ton mile fell off some five percent, but this drop was more than offset by a 19 percent drop in operating expense per revenue ton mile. Accompanying this decline in unit costs, and a major factor responsible for the decline, was the tremendous technological advance in trunkline aircraft. This advance accounted in large part for the great increase in employee productivity – revenue ton miles per employee more than doubled for the trunks from 1947-1948 to 1955.

Rationale of Recent CAB Decisions

It was with this greatly improved trunkline operating record before it that the Civil Aeronautics Board considered the several major new route cases which it decided in the last three months of 1955. A reading of the Board decisions indicates that in addition to an aware-

ness of the overall industry operating trends in recent years, the Board regarded their individual records as having real significance—particularly that of the Big Four group as compared with that of the nine other, smaller trunklines. It was apparent to the Board that the relative positions of the trunklines had not changed to any marked extent since 1938; that the Big Four had consistently dominated the domestic industry as to volume of traffic, revenues and profits, and that while the operating results of each of the 13 carriers had improved markedly during recent years, the Big Four's dominance would continue unless the smaller lines were definitely favored by lucrative new route awards in the pending proceedings.

The remarkable similarity of each carrier's growth to that of the others, or the similarity in growth of the Big Four to that of other carrier groups can be clearly shown in a variety of ways. One method, in terms of the "profitability index"—revenue ton miles per station served—is shown in the following table.

TABLE 5 — REVENUE TON-MILES PER STATION SERVED BY TRUNKLINES DURING FIRST TWO AND LAST TWO YEARS OF CAB JURISDICTION

Carrier	*1938-1939 Average*	*1953-1954 Average*	*Growth**
Big Four			
American	433	6,438	14.9
United	447	5,061	11.3
TWA	451	6,173	13.7
Eastern	288	3,415	11.9
Average	404	5,082	12.6
Middle Six			
Delta†	90	1,435	15.9
Capital	96	1,543	16.1
Northwest	183	2,964	16.2
National	15	2,335	155.7
Braniff†	94	927	9.9
Western†	75	1,000	13.3
Average	97	1,534	15.9
Small Three			
Continental	28	497	17.8
Northeast	17	325	19.1
Colonial	74	441	6.0
Average	28	421	15.0

* The number of times the 1953-54 average was of the 1938-39 average.
† Merged figures.

In terms of growth from 1938-1939 to 1953-1954, ten of our 13 domestic trunklines have grown from 11 to 19 times. Two other trunks have grown somewhat less rapidly, while one has grown much more rapidly than any of the others. In light of the length of the period involved,

however,—16 years—and the drastic changes which have taken place within the industry during that time, it is surprising that the various rates of growth are not more diverse. In terms of carrier groups, the Big Four average growth was exceeded by that of both the middle six and the small three groups, but the dominant position of the Big Four remained unquestioned. It is clear from all three of the recent Board decisions—the New York-Chicago, Denver Service, and Southwest-Northeast cases—that the Board intended to reduce this dominance, and toward that end has already granted substantial new route awards and improvements to six of the nine smaller trunklines.

Thus, in the Southwest-Northeast Service Case, the Board made the following statement at page 3 of the mimeographed decision:

> "As we pointed out in the *New York-Chicago Case* the statutory objective of a sound national air route structure requires, in the selection of a carrier to provide needed new services, consideration of the applicants' competitive positions and their relative need for strengthening. It is vital, in our opinion, to so develop the national air route structure as to tend to decrease rather than increase the gap between the relative size of the Big Four carriers and the smaller trunks."[9]

The pertinence of these observations to this study is, of course, first, to point out the greatly intensified competitive situation among our trunklines which will inevitably result, after more than seven years of practically no increase in competition; and second, to identify certain characteristics of the newly authorized competitive services by way of anticipating generally some of the problems which must be faced and resolved by both the carriers themselves and the Board if the new competition is to redound to the benefit of the overall public interest.

The Increase in "Multi-Carrier" Competition

It is immediately apparent that a significant aspect of the increased competition resulting from recent Board decisions is the extent to which our principal trunkline air travel markets will in the future be served not by one or two carriers, but by three, four or five airlines. As has already been demonstrated, the principal markets of only three of our trunklines—American, TWA and United—were served extensively in 1954 by three or more effective competitors. The other trunks had as their principal sources of revenue either two-carrier competitive markets, or monopoly markets.

Some indication of the sweeping changes which will take place in the direction of more multi-carrier competition is shown in the table below, which categorizes main markets of the Big Four according to number of competitors before and after the three recent new route decisions of the Board.

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[9] Order Serial No. E-9758, decided November 21, 1955.

TABLE 6 — INCREASING SIGNIFICANCE OF MULTI-CARRIER COMPETITIVE PROBLEM

Big Four Principal Markets:	*September 1954*	*After recent C.A.B. Decisions*
Monopoly City Pairs	28	12
Two Competitor Pairs	33	30
Three Competitor Pairs	11	24
Four Competitor Pairs	1	5
Five Competitor Pairs	0	2
Total	73	73
Big Four Passenger Miles (000) In Their Principal Markets:*		
Monopoly City Pairs	51,599	17,296
Two Competitor Pairs	117,233	97,116
Three Competitor Pairs	120,744	121,880
Four Competitor Pairs	4,643	32,962
Five Competitor Pairs	0	24,965
Total	294,219	294,219

* Based on Big Four Passenger Miles Generated in their Principal Markets in period September 17-30, 1954.

As shown by the table, the number of city pairs with three or more competitors will probably jump from 12 to 31, and more importantly, this will mean that multi-carrier competition, which in 1954 comprised only 43 percent of the Big Four main markets, will probably account in the future for some 61 percent of such revenue sources. If, furthermore, it can be anticipated that in other pending major route cases additional new route grants may be made similar to those recently issued, three or more competitors may well be competing for 75 percent or more of the principal revenue sources of the Big Four.

Also since more of the new competitive awards have been granted to the smaller trunklines, it is obvious that the great expansion of multi-carrier competition will involve these carriers to a much greater extent than even before. The validity of this conclusion is shown by the fact that one or more of the smaller trunklines have recently been added by the Board in 17 of the Big Four's principal city pairs, which accounted in the September 17-30, 1954 period for 67,600,000 of the Big Four passenger miles. In none of these 17 markets did any of the Big Four carriers receive an award. By way of comparison, in only eight of such main markets, accounting for 33,939,000 passenger miles, one or more of the Big Four carriers received new route awards; and finally, in three markets, generating 11,523,000 Big Four passenger miles, route awards have recently been granted to *both* Big Four and smaller trunkline carriers.

In net effect then, the three Board decisions most recently issued

have accentuated the multi-carrier competitive problem considerably, and have been characterized by extensions of medium and small trunklines into many of the principal revenue producing city pairs of the Big Four.

Future Significance of Multi-Carrier Competition

Just what the increased intensity of competition among our trunklines may mean to the trunklines themselves and to the public is a highly conjectural matter. In many long-haul markets with relatively light traffic flow, two or three-carrier competition has been created for the first time. In such markets, there is the possibility that no one of the competitors will generate sufficient traffic to support a frequent, high quality air service. Where this happens, of course, is it not conceivable that the traveling public will be worse off with the competitive service than it was without it?

Other obvious questions one might ask are, can the smaller trunks chew what they've bitten off, and if so, how soon can they be expected to with the limited size of their present fleets? Will the Big Four tend to concentrate their efforts — perhaps more than formerly — on preserving their leading position relative to the smaller nine trunks, rather than competing against one another? Or, since each of the Big Four has also received new route improvements from the Board recently, will they not give first consideration to exploiting their own newly authorized services? And also, as the smaller trunklines have been somewhat "upgraded," will they not tend to concentrate upon the longer-haul, more lucrative markets of their new systems and relax, somewhat, their efforts in their secondary markets? If so, what will this mean to the cities and their travelers making up such markets?

Is there not a real possibility that in these secondary areas the local service carriers will be able to offer these travelers a high quality of service, if given the opportunity, regardless of what the tendencies of the trunks may be?

These and many other equally provocative questions are naturally prompted by the recent route grants. They give at least some indication of the gravity of the problems which must be faced by the industry and the Board in the next few years. Since the writer makes no claim to clairvoyance he does not have the answers, but certain observations would, perhaps, be in order. These observations will take the form of precautionary comments, based in large part upon the study co-authored by the writer seven years ago during the airline depression of 1947 and 1948.

As pointed out in that study, competition among our air carriers has resulted in a wide variety of direct benefits to the traveling public. Such benefits have included the insurance to the United States public of the fastest, most luxurious aircraft. Other benefits include numerous examples of improved airline service quality when measured in

terms unrelated to the type of aircraft flown. The effectiveness of the competitive force in the field of passenger rates has been demonstrated in recent years as low fare air coach has expanded more and more. The writer takes this opportunity, therefore, to reaffirm his belief that competition among airlines has been and continues to be a potent factor in improving service and reducing fares offered the public.

As was recognized in the Harvard Study, however, the force of competition among our trunklines can be relied upon only so far to improve service quality and reduce fare levels. And this is particularly true where the competitive force is exerted by the third or fourth competitor in a market. Also, and of equal significance, is the proposition that the competitive force should not be underestimated in its possible adverse effect upon airline earnings.

Thus, as to competition's effect upon flight schedules offered our travelers, the following mixed conclusions appearing at page 131 of "Airline Competition" are in point:

> ". . . , competition has been and continues to be an important force in assuring the traveler of a high standard of schedule service, especially in major markets where the ability to support the schedule patterns of the competing carrier is unquestionable even with the increased size and speed of new aircraft.
>
> ". . . , there is no basis for the presumption that competition will invariably bring about a higher standard of schedule service. Due consideration must be given to those factors which determine the schedule service which a particular airline can provide in a given market."

Of even more significance to this present article in light of recent Board decisions, are the following statements, accompanying the conclusions already quoted:

> ". . . , the quality of schedule service has been significantly improved in relatively few markets by the addition of a third and fourth competitor; in fact, in some cases, this amount of competition has led to a lack of significant improvements in service and even, in extreme cases, to a deterioration in service.
>
> ". . . , the only measure of schedule quality which has been improved by competition in practically all cases is that of the volume of seats scheduled or its equivalent—space availability."

And in similar vein are two other conclusions appearing in the same context:

> ". . . , the fact that competition did not improve the quality of airline schedules in more than half of the markets studied is significant of the type of competitive authorizations which have accompanied the expansion of the domestic route structure. In other words, many competitive routes have been authorized over which the competing lines have not been able to improve schedule service because of the existence of other determinants of airline service which have restricted the efforts of the airline managements in these markets.

> ". . . , the effect of striving for competitive superiority in some markets has in some instances had an adverse effect on the quality of schedule service which a carrier has rendered in its noncompetitive markets. On the other hand, in some instances, the competition for some markets has often brought about an improved quality of schedules in noncompetitive markets. Here again the individual circumstances are determinative of the end result."

These general observations were supplemented and clarified in the 1949 airline competition study with detailed case studies of particular airline markets. The New York-Chicago case study, for example, concluded that while airline competition had been an important influence between New York and Chicago in improving schedule service from 1940 through 1948, nevertheless,

> ". . . , the quality of service offered to the New York-Chicago traveler during the postwar period was not noticeably improved by the competition of three and four carriers rather than two. A high frequency of service with nonstop flights would undoubtedly have been offered to the traveler had only two airlines competed in this market. . . ."[10]

and, further, that

> ". . . , although the existence of three effective competitors for many years between New York and Chicago and the addition of a fourth competitor in 1945 did not adversely affect the quality of service in this market to a marked extent, there is some evidence of a trend in this direction. In the face of falling demand, the principal competitors concentrated flights at peak periods of demand with some sacrifices in frequency. . . ."[10]

Similarly, in the field of airline fares, the study found that competition among the trunklines was a major influence in preserving a low air fare level within the United States, but concluded that

> ". . . , the fares charged the traveler in the major airline markets in the domestic United States have not been generally reduced through the *additional* competition certificated in such markets. This has been due to the fact that the base rates and mileages to which they were applied by the original carriers in constructing the fares could not be improved by the added carriers. The base rates of the latter were in general no lower than those used by the lines serving such markets, and the fare-making routes already in existence were as short as or shorter than those which the new carriers could provide."[11]

and also that

> ". . . , the importance of airline competition as an influence upon air fares was necessarily confined somewhat by two other forces which placed reasonable ceilings upon airline rates. These were, first, the influence of railroad competition, previously discussed in Chapter 14, and second, the philosophy of certain airline

[10] Airline Competition," *supra*, p. 269.
[11] *Id.*, p. 475.

> managements that greater net income would result from lower rates entirely aside from the competitive aspects of such rates."[12]

In none of its recent decisions has the Board differed, basically, with the foregoing quoted conclusions. The Board has expanded competition among the trunklines on other grounds, viz., the need for increasing the size and strength of the trunklines other than the Big Four, and the belief that such increased strength would at least indirectly benefit travelers in other cities served on the systems of the smaller trunks.

At page 4 of its Southwest-Northeast decision, the Board made this point in the following language:

> "We cannot ignore the fact that substantial route awards to the larger carriers would tend to create a greater unbalance in carrier size, and thereby adversely affect the ability of the smaller trunks to compete effectively in markets which they jointly serve with the larger carriers. We believe that the benefits to be derived from effective competition will be spread to a greater number of cities if the size disparity between the smaller and larger carriers is reduced. In many markets which are jointly served today by a small trunk and a Big Four carrier there is no effective competitive service because the smaller carriers' resources and route systems inhibit them from challenging their larger competitors. To the extent that we choose a small trunk instead of a Big Four carrier to provide a needed new service in high density markets, we enlarge the small carrier's opportunity to render effective competitive service in other markets which they are already authorized to serve.
>
> "It is also likely that as the smaller carriers' route systems are strengthened they will be in a better position to experiment with the provision of low cost transportation in markets which are currently served only with first class service."[13]

The skeptic may perhaps take issue with the Board on either or both of these points. He may argue that the smaller trunks have now been introduced into the "big time," and that their efforts to compete in their new large markets will be doomed to failure; that at best they will have to slight their smaller markets in order to serve the big ones and that in net, they will become weaker rather than stronger.

There is some merit, certainly, to this view, particularly in the near future. However, the demonstrated effectiveness of some of these same smaller carriers over the past ten years, in competition with one or more of the Big Four tends to belie the long run validity of this skeptical view. And this is true despite the fact that competition, particularly of the multi-carrier type, has been shown to be costly in many situations in the past. Two final quotations from "Airline Competition" are pertinent here. The first bears on the matter of the effect of competition upon Big Four self-sufficiency in the 1940-1948 period and appears at page 540 of that study.

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[12] *Id.*, p. 476.
[13] Order Serial No. E-9758, decided November 21, 1955.

> "Eastern Air Lines does not have a system which is naturally more economical to operate than those of the other three of the Big Four carriers, rather the contrary; but the relative lack of competition on this system has made it possible for this carrier to achieve in large part its outstanding record of earnings. Therefore, if Eastern has been able to achieve this profit record in the face of definite operational and sales handicaps, it is reasonable to conclude that if the other of the Big Four, with naturally stronger systems, had not been duplicated to the extent that they have, the postwar operations of these carriers would have been possible at much less of a burden to the government than has in fact been the case. This observation holds especially true with respect to the competition which has been authorized in so many major markets where all three of these other carriers compete with one another."

And again, at page 585, relative to four smaller carriers, a similar conclusion appears:

> ". . . the force of airline competition has importantly increased the break-even needs, and the governmental burden indicated thereby, of all four of the carriers, Capital, National, Northeast, and Western Air Lines. That competition has played a very important role in adversely affecting break-even needs of this group of carriers is not surprising, in view of the fact that in the postwar years they were subject to more effective competition than any of the other small carriers. Furthermore, the *change* in competitive status of these four carriers, postwar over prewar, was much more drastic than that of the other small airlines.
>
> ". . . the influence of airline competition in increasing the break-even needs of these carriers was much more pronounced on their revenues than on their expenses. With one exception (Northeast), these carriers achieved relatively low levels of operating cost per unit produced, despite the competitive influence. In terms of revenues per seat mile, however, these carriers were less successful. Airline competition, in lowering average fares and load factors, adversely affected the unit nonmail revenues of the entire group. The continued high break-even needs which obtained within this group therefore resulted in large part from the force of airline competition acting primarily upon revenues."

Since these paragraphs were written—in 1949—all but two of our domestic trunklines have become economically self-sufficient. This most important fact, alone, provides good grounds for optimism as to the future, however fraught with complex problems that future may be. If air travel volumes continue to increase in the next few years as they have in the past the dangers implicit in recent extensions of multi-carrier competition may well be offset by the benefits which can result to travelers and stockholders alike from the emergence of a greater number of larger, sounder trunk air carriers.

If, as the skeptics predict, the trunklines tend to concentrate their best scheduling and sales efforts on their long-haul, competitive markets to the detriment of their smaller cities, it would seem reasonable that plans should be made by both the industry and the Board to have

the local service carriers expand their services sufficiently to meet the needs of such cities for continued frequent, fully adequate airline service. Such planning, if begun soon enough, would no doubt present the opportunity for substantial improvement in the operating results of the local carriers and a consequent reduction in their dependence on subsidy mail pay. Basic to whatever planning and management decisions may be made in the next few, very difficult years, however, is a continuous and accurate analysis of the changing competitive relationships about to take place. It is hoped that this study, in pointing out some of the dangers implicit in the new competitive route awards, and suggesting methods of measuring the changes as they occur, will be of some help.

APPENDIX A — IMPORTANCE OF DOMESTIC TRUNKLINE PASSENGER REVENUES
(Year Ended June 30, 1955)

	Passenger Revenues as Percent of	
Base Carrier[1]	*Nonmail Transportation Revenues*	*Non-Subsidy Transportation Revenues*
American	91.4%	89.4%
United	92.2	88.5
Eastern	95.6	93.9
TWA	93.1	90.1
Delta	93.8	91.3
Capital	92.8	90.0
Northwest	88.8	85.7
National	94.0	92.5
Braniff	94.3	91.6
Western	95.6	92.2
Continental	95.2	92.3
Northeast	94.9	93.8
Colonial	97.2	96.8
Trunkline Average	93.2%	90.6%

[1] In order of domestic non-subsidy transportation revenues—year ended June 30, 1955.

APPENDIX B — MULTI-CARRIER COMPETITIVE MARKETS
(September 17-30, 1954)

			Base Carrier's Passenger Miles		
				Percent of Base Carrier's	
Base Carrier	*Market*	*Number* Competitors*	*Total (000)*	*Competitive Markets*	*Total Principal Markets*
American	Los Angeles-N. Y.	3	12,425		
	Chicago-New York	3	8,944		
	Chicago-Los Angeles	3	8,583		
	Los Angeles-Wash.	3	4,739		
	New York-San Fran.	3	2,268		
	Boston-Los Angeles	3	2,075		
	Chicago-Washington	4	1,828		
	Chicago-Detroit	3	1,705		
	Boston-Chicago	3	1,427		
Total "Multiple Competition"			43,994	74.1%	60.0%
United	New York-San Fran.	3	10,488		
	Los Angeles-N. Y.	3	7,200		
	Los Angeles-San Fran.	3	6,501		
	Chicago-New York	3	6,170		
	Chicago-Los Angeles	3	5,241		
	San Fran.-Washington	3	2,590		
Total "Multiple Competition"			38,190	60.8%	54.2%
Eastern	Louisville-New York	3	883		
Total "Multiple Competition"			883	3.2%	1.8%
TWA	Los Angeles-New York	3	10,019		
	New York-San Fran.	3	7,454		
	Chicago-Los Angeles	3	6,153		
	Chicago-New York	3	4,842		
	San Fran.-Wash.	3	1,401		
Total "Multiple Competition"			29,869	66.7%	56.0%
Delta	NONE	..	....	..	..
Capital	Chicago-Wash.	4	1,193		
	Milwaukee-New York	3	905		
	Chicago-Detroit	3	648		
	Detroit-New York	4	318		
Total "Multiple Competition"			3,064	28.8%	19.8%
Northwest	Detroit-New York	4	956		
	Milwaukee-New York	3	899		
Total "Multiple Competition"			1,855	18.8%	11.2%
National	NONE	..	....	..	..
Braniff	NONE	..	....	..	..
Western	Los Angeles-San Fran.	3	2,803		
	Las Vegas-Los Angeles	3	1,359		
Total "Multiple Competition"			4,162	67.2%	46.6%
Continental	NONE	..	....	..	..
Northeast	Boston-New York	3	267		
Total "Multiple Competition"			267	100.0%	11.7%
Colonial	NONE	..	....	..	..

* Including the base carrier.

APPENDIX C — TECHNICAL NOTES

The basis for selection of the principal city pairs or markets for each trunkline carrier used in this study is found in the data compiled from the September 1954 Origin and Destination Traffic Report of the Board prepared by the Office of Carrier Accounts and Statistics and published by that office in December 1955 under the title of "Analysis of Competitive Markets Among the Trunklines." This competitive study prepared by the Board's staff was based upon all city pairs which in the period September 17-30, 1954, generated a minimum of 10,000 passenger miles. As explained in the technical appendix to that study, the passengers and passenger miles dealt with therein include more than simply the traffic originating at one point of each pair and terminating at the other. It also includes additional passengers traveling by two-carrier routings in other city pairs which were distributed among single-carrier city pairs as explained in the technical notes following the Board staff's study.

The passenger traffic in the present study therefore includes for September 17-30, 1954, not only that which originates at one city and terminates at the other city of each city pair but also some additional passengers which were interchanged at each city of the city pair. Unlike the basic city pair selection and traffic study in the months of September 1940 and September 1947, however, and summarized in "Airline Competition," the recent CAB staff study does not include *all* passengers originating at one point of a city pair and interchanged at the other point with another air carrier. This simply means, of course, that relative to September 1940 and September 1947 data then, the September 1954 data used herein, *understates* the passenger traffic of a carrier in its principal city pairs, and by the same token somewhat *overstates* in that month the number of city pairs needed to represent 50 percent of each carrier's system passenger miles. It is not believed, however, that this dissimilarity between the data used from the CAB staff study of trunkline competition and that used in "Airline Competition" for the survey months of 1940 and 1947 is so significant that comparisons between the two studies cannot safely be made.

Trunklines Covered. Comparative studies of the competitive situation among the trunklines in September 1954 and the months covered in "Airline Competition" (March and September 1947 and September 1940 and March 1941) are subject, of course, to the change in the number of trunklines which took place between 1947 and 1954. The merger of Delta with Chicago and Southern, that of Braniff with Mid-Continent and of Western Air Lines with Inland, reduced the number of trunklines to a total of 13 in 1954 as compared with 16 trunks in existence in the earlier periods. This change is, of course, recognized and has been pointed out in the tables and charts of the present article.

APPENDIX D — LISTING OF PRINCIPAL MARKETS BY CARRIERS
SEPTEMBER 17-30, 1955

Carrier	*City Pair*	*Passenger Miles (000)*
American	Los Angeles-New York	12,425
	Chicago-New York	8,944
	Chicago-Los Angeles	8,583
	Los Angeles-Washington	4,739
	Detroit-New York	4,053
	Dallas-New York	3,991
	Dallas-Los Angeles	3,942
	Boston-New York	3,135
	New York-Washington	3,121
	Dallas-San Francisco	2,543
	Detroit-Los Angeles	2,358
	Buffalo-New York	2,275
	New York-San Francisco	2,268
	Boston-Los Angeles	2,075
	Chicago-Washington	1,828
	Chicago-Detroit	1,705
	Boston-Chicago	1,427
	Chicago-Dallas	1,394
	Cincinnati-New York	1,358
	El Paso-Los Angeles	1,218
United	New York-San Francisco	10,488
	Chicago-San Francisco	9,315
	Los Angeles-New York	7,200
	Los Angeles-San Francisco	6,501
	Chicago-New York	6,170
	Chicago-Los Angeles	5,241
	Denver-New York	3,145
	San Francisco-Seattle	3,002
	Cleveland-New York	2,951
	Chicago-Denver	2,809
	Los Angeles-Seattle	2,740
	San Francisco-Washington	2,590
	Chicago-Seattle	2,541
	Chicago-Cleveland	2,060
	New York-Seattle	1,981
	Denver-Los Angeles	1,777
Eastern	Miami-New York	9,547
	Houston-New York	3,771
	Chicago-Miami	3,646
	Atlanta-New York	3,226
	New Orleans-New York	2,870
	New York-Washington	1,848
	Boston-New York	1,509
	Detroit-Miami	1,299

Carrier	*City Pair*	*Passenger Miles (000)*
	New York-San Antonio	1,220
	Chicago-Tampa	1,155
	Cleveland-Miami	1,128
	Boston-Miami	1,064
	New York-Tampa	1,047
	Miami-Philadelphia	930
	Houston-Washington	920
	Houston-New Orleans	910
	Louisville-New York	883
	Miami-Washington	873
	Chicago-Louisville	847
	Atlanta-Washington	841
	New Orleans-Washington	828
	Jacksonville-New York	820
	Birmingham-New York	799
	Charlotte-New York	720
	St. Louis-Washington	687
	Atlanta-Chicago	686
	Atlanta-Miami	683
	Miami-St. Louis	631
	Miami-Pittsburgh	614
	Chicago-Indianapolis	563
	New York-St. Louis	510
	Atlanta-Tampa	501
	Boston-Washington	493
	New York-Richmond	469
	San Antonio-Washington	457
TWA	Los Angeles-New York	10,019
	New York-San Francisco	7,454
	Chicago-Los Angeles	6,153
	Chicago-San Francisco	5,282
	Chicago-New York	4,842
	New York-St. Louis	3,027
	Kansas City-New York	2,635
	Los Angeles-St. Louis	2,354
	New York-Pittsburgh	2,014
	Kansas City-Los Angeles	1,934
	Chicago-Philadelphia	1,847
	Los Angeles-Pittsburgh	1,657
	Chicago-Kansas City	1,461
	San Francisco-Washington	1,401
	Chicago-Pittsburgh	1,277
Delta	Chicago-Miami	2,002
	Dallas-New Orleans	1,544
	Chicago-Houston	1,202
	Chicago-New Orleans	1,106
	Atlanta-Dallas	1,034

Carrier	City Pair	Passenger Miles (000)
	Atlanta-Chicago	924
	Chicago-St. Louis	892
	Chicago-Cincinnati	857
	Cincinnati-Miami	777
	Atlanta-Cincinnati	572
	Chicago-Memphis	571
	Houston-St. Louis	493
	Atlanta-Miami	430
	Detroit-Indianapolis	420
	Birmingham-Dallas	368
	New Orleans-St. Louis	342
	Memphis-New Orleans	293
	Chicago-Jacksonville	276
	Detroit-Houston	273
	Chicago-Knoxville	264
Northwest	Chicago-Seattle	3,745
	Minneapolis-New York	2,997
	Chicago-Minneapolis	2,836
	New York-Seattle	2,688
	Detroit-New York	956
	Minneapolis-Seattle	909
	Milwaukee-New York	899
	Detroit-Seattle	825
	Detroit-Minneapolis	757
Capital	Chicago-Washington	1,193
	Cleveland-New York	1,063
	Detroit-Washington	1,017
	Milwaukee-New York	905
	New York-Pittsburgh	873
	Chicago-Cleveland	729
	Chicago-Detroit	648
	Minneapolis-Washington	602
	Norfolk-Washington	574
	Cleveland-Washington	561
	Pittsburgh-Washington	556
	Chicago-Norfolk	528
	Chicago-Pittsburgh	504
	Detroit-Pittsburgh	452
	Cleveland-Detroit	416
	Milwaukee-Washington	401
	Buffalo-Washington	401
	Detroit-Milwaukee	398
	Cleveland-Minneapolis	364
	Buffalo-Philadelphia	363

Carrier	*City Pair*	*Passenger Miles (000)*
	Chicago-Grand Rapids	348
	Chicago-Saginaw	348
	Mobile-New York	339
	Cleveland-Milwaukee	335
	Detroit-Norfolk	328
	Detroit-New York	318
	Rochester-Washington	310
	Flint-New York	297
	Minneapolis-New York	290
National	Miami-New York	7,922
	Miami-Washington	1,689
	New York-Tampa	1,030
Braniff	Dallas-Houston	1,148
	Chicago-Dallas	1,103
	Chicago-Houston	896
	Dallas-San Antonio	624
	Dallas-Denver	621
	Chicago-San Antonio	513
	Chicago-Kansas City	511
	Kansas City-Minneapolis/St. Paul	425
	Houston-Tulsa	385
	Denver-Houston	382
	Dallas-Kansas City	353
	Chicago-Oklahoma City	334
	Chicago-Wichita	313
	Houston-Kansas City	284
	Minneapolis/St. Paul-Omaha	280
	Kansas City-Omaha	275
	Austin-Dallas	268
	Denver-Oklahoma City	260
	Corpus Christi-Dallas	254
	Amarillo-Dallas	214
	Kansas-City-Oklahoma City	211
	Austin-Chicago	207
	Minneapolis-St. Louis	203
	Denver-San Antonio	192
	Houston-Oklahoma City	179
	Dallas-Oklahoma City	177
Western	Los Angeles-San Francisco	2,803
	Los Angeles-Minneapolis	2,080
	Las Vegas-Los Angeles	1,359
	San Francisco-Seattle	1,034
	Los Angeles-Seattle	1,002
	Los Angeles-Salt Lake City	647

Carrier	*City Pair*	*Passenger Miles (000)*
Continental	El Paso-Houston	994
	Denver-Kansas City	912
	El Paso-San Antonio	672
	Denver-Tulsa	344
	Albuquerque-Denver	263
	Denver-Wichita	254
	Colorado Springs-Kansas City	224
Northeast	New York-Portland	413
	New York-Worcester	337
	Boston-Montreal	270
	Boston-New York	267
	Bangor-New York	220
	New Bedford-New York	199
	New York-Presque Isle	174
	Bangor-Boston	163
	Boston-Pesque Isle	122
	Manchester-New York	111
Colonial	Montreal-New York	1,927
	Albany-New York	307

THE "BERMUDA" CAPACITY CLAUSES

By P. van der Tuuk Adriani

Head of the Bureau for Air Policy of the Juridical and Political Department of the Netherlands Civil Aviation Administration.

SINCE 1946 the name Bermuda has taken on a very specific meaning in all circles related to civil aviation. Not so much for the touristic charms of these islands in this case—however wonderful they may be—but for reasons which have an immediate bearing on the very fundamentals of commercial airline operation.

As a matter of fact it was on the Bermuda islands that the United States and the United Kingdom negotiated a civil aviation agreement in February 1946. The fact that a treaty or an agreement bears the name of the place where it was concluded is not unusual at all. Yet one could wonder why a simple bilateral air agreement—even between two very important countries—could not only become so renown, studied and discussed, and set a pattern to be followed all over the world, but could even become quite a definite conception.

How is this to be explained? By the mere fact that the Final Act of the negotiations—not even the agreement itself—contained a few paragraphs on how competition between the airlines of both parties should be kept within reasonable limits? This is really the case, but still one could wonder why these few clauses found such a world wide application.

In dealing with these "Bermuda" clauses, however, one should never forget that they were drawn up as a compromise between two conflicting philosophies, i.e. on the one hand, a strong desire for a large amount of freedom for commercial activity, and on the other hand, an equally strong desire for protection of national civil aviation interests. It seems that these compromise-clauses were in accord with vague and lingering thoughts in many other countries all over the world, which countries however had not been able to formulate them clearly.

Still another question arises, namely how it was possible, that the Bermuda clauses, drafted in a very special case, could be copied on so many other occasions. This should be attributed to the fact that these Bermuda clauses were drafted in general terms, just formulating some broad ideas and are therefore to a certain extent vague and flexible, creating possibilities for protection as well as for a necessary amount of freedom.

Two Categories of Stipulations

In themselves the so-called Bermuda clauses could be divided into two categories of stipulations. On the one hand there are some general rules as to competition, the most widely known and copied of which

state "that the air transport facilities available to the traveling public should bear a close relationship to the requirements of the public for such transport," "that there shall be a fair and equal opportunity for the carriers of the two nations to operate on any route between their respective territories," and "that in the operation by the air carriers of either government of the trunk services, the interest of the air carriers of the other government shall be taken into consideration so as not to affect unduly the services which the latter provides on all or part of the same routes."

On the other hand there is a clause which deals more closely with competition in so far as it sets rules as regards the capacity which the designated air carriers of the contracting parties are allowed to provide, thereby stating that this capacity should in the first place have a bearing on third and fourth freedom traffic. As a matter of fact the rule in question runs as follows:

> "That it is the understanding of both Governments that services provided by a designated air carrier under the Agreement and its Annex shall retain as their primary objective the provision of capacity adequate to the traffic demands between the country of which such air carrier is a national and the country of ultimate destination of the traffic. The right to embark or disembark on such services international traffic destined for and coming from third countries at a point or points on the routes specified in the Annex to the Agreement shall be applied in accordance with the general principles of orderly development to which both Governments subscribe and shall be subject to the general principle that their capacity should be related:
>
> (a) to traffic requirements between the country of origin and the countries of destination;
>
> (b) to the requirements of through airline operation; and
>
> (c) to the traffic requirements of the area through which the airline passes after taking account of local and regional services."

After having reproduced the wording of the principle Bermuda clauses it seems interesting to try and interpret them, beginning with the last mentioned clause. A first glance at its wording reveals, that it is beyond doubt that the capacity cannot be tied down to what is called the primary objective but that the capacity required for this traffic may be augmented by a supplementary capacity for the carriage of fifth freedom traffic.

First of all, if there is a *primary* objective, there should also be room for *other* objectives, otherwise the provision of capacity for 3rd and 4th freedom should have been made the only object to be dealt with.

In the second place the clause explicitly mentions the *right* to embark or disembark (at a point or points) in the territory of the other contracting party international traffic destined for and coming from third countries. This right is, however, not unlimited; it shall be applied in accordance with the general principle of *orderly develop-*

ment. When putting the question on which of these two words the stress should fall, it seems that they should be stressed as even here the conflicting philosophies have come to a compromise; the word "orderly" clearly pointing into the direction of protection and of proceeding step by step after careful consideration of all aspects and more or less implying something static in this way, whereas the word *development* on the contrary points into the direction of commercial and dynamic enterprise.

General Principle of Capacity

Finally and as a sort of summing up, a general principle as regards capacity is given, containing three elements to which this capacity should be related.

> Item (a) seems a repetition, though in other words, of the above-mentioned "primary objective." Yet the difference in wording makes this stipulation less tight; it seems beyond doubt that the traffic requirements mentioned here may be taken in a broader sense than the capacity adequate to the traffic demands between the country of which such air carrier is a national and the country of ultimate destination and so may also comprise—as the case may be—some transit traffic.
>
> Item (b) even puts forward the carriage of fifth freedom traffic as essential to the economic operation of air routes which consist of more than one stage; at the intermediate landing-points passengers and goods coming from the starting point of the line are disembarked. If it should not be allowed to fill these vacant places with passengers and goods, picked up at these intermediate stopping places, the airline would certainly work at a loss.
>
> Item (c) states through its very wording clearly and rightly that countries or peoples do have traffic requirements and that foreign airlines calling there—after taking account of local and regional services—should meet these requirements. For these foreign airlines this local and regional traffic will in many cases be fifth freedom carriage of an "en route" nature, which could hardly be coped with if no additional capacity can be provided.

We may conclude from the above that the Bermuda capacity clauses clearly leave room for fifth freedom. There is, however, no concrete answer to the question of the *quantity* of fifth freedom allowed in relation to the quantity of third and fourth freedom. The fixing of such a relation would be contrary to the very spirit of the Bermuda principles which allow a certain amount of latitude and flexibility, which is a "condition *sine qua non*" for the young and dynamic mode of transport, civil aviation represents. On the contrary the introduction of the idea of promotional traffic in many bilateral agreements was derived from the original Bermuda by stating that the transport facilities should bear a close relationship to the present and *reasonably*

anticipated requirements, clearly indicates that the capacity cannot and should not be tied down to an initially or arbitrarily fixed value.

Although not laid down, in so many words, in the "Bermuda clauses" themselves, the application of these clauses is based on the idea of an ex post facto review whereby the air carrier in question should substantiate after a reasonable period that the capacity it has provided in that period reasonably concurred with the Bermuda principles. In applying such an ex post facto review ample consideration should be given to the fact that the presence of transport facilities always tends to stimulate the traffic requirements of the public. This means that a foreign line not merely brings about competition but also contributes to building up traffic. From this increased traffic the national carrier as well will certainly reap benefits.

Relationship of Capacity and Traffic Requirements

Another refinement in quite a number of bilateral agreements, otherwise based on the Bermuda principles, is the introduction of the words "at a reasonable load factor" in the clause, requiring a close relationship between the capacity and the traffic requirements.

This insertion seems very much to the point indeed. A strict interpretation of the requirement that there should be a *close* relationship between the capacity provided and the requirements for transportation, could easily lead to a situation whereby the carrier in question would not be allowed to augment its capacity unless its aircraft were permanently loaded to 100% of their capacity.

However, it is a well known fact that operating a transport service at an over-all load factor of more than 65 or 70 per cent of its capacity is not a sound proposition; in these circumstances quite a number of the individual services are fully booked and the operator would on many occasions have to disappoint prospective passengers.

In the long run the passengers will be inclined to turn away from the carrier in question.

As it is beyond any doubt that such a situation was certainly not meant by those who drafted the original Bermuda, but that they on the contrary simply had in mind to avoid a situation whereby one carrier could take for its account too great a part of the traffic to the detriment of the partner by providing excessive capacity, it seems clear that even if the notion of a reasonable load factor is not explicitly introduced, this idea should be kept in mind when considering the capacity which the other contracting party thinks appropriate to introduce or maintain.

The share which the air carriers of each of the two contracting parties may take in the traffic brings us to the clause already mentioned, that there shall be a fair and equal opportunity . . . etc.

Yet it seems necessary to make a very clear distinction between the *opportunity* to operate and the *share* in the operations. Without any doubt it would be a serious mistake to interpret this clause in a

sense as if the carriers of both contracting parties should necessarily take a fair and equal share in the traffic. This could not be the question for the simple reason that when interpreting this clause in this way the words "fair" and "equal" would be conflicting, for in this case neither "fair" would always be identical to "equal" nor would "equality" always be "fair."

On the contrary, except in those special cases of a complete "balance of power," much will depend on the circumstances prevailing. If equality of the share should be sought this would mean that the stronger or more enterprising carrier of one country would have to settle down on the lower level of the carrier of the other country. Such a situation would certainly not be in favor of the needs of the public nor would it be fair towards the other carrier. So one might even be inclined to say that the fairness invoked in reality excludes a complete equality.

But the clause rightly aims at a fair and equal *opportunity* to operate which means that the carrier of one party which happens to be the weaker still has the same—equal—fundamental right to operate as the stronger competitor and should just as well be enabled to have its place under the sun. And this cannot be but fair, even if in practice this place might only be a modest one. This conception also naturally leads to the following clause "that in the operation by the air carriers of either government the interest of the air carriers of the other government shall be taken into consideration so as not to affect unduly the services which the latter provides on all or part of the same routes."

This clause might possibly be considered as the crucial point and the very fundamental idea behind the Bermuda: competition is all right but no cut-throat competition in the sense of striving for a monopoly or the domination by one party over the other. On the contrary this clause seems to revive the old slogan of: "live and let live."

The Load Factor and Fifth Freedom

The acknowledgement of the fact that the over-all load factor should not be required to exceed a reasonable and commercially sound figure should also be taken into consideration by the governments when reviewing the capacity offered by a foreign air carrier for fifth freedom traffic in their countries. When for instance the third and fourth freedom traffic of that carrier would take 40 per cent of the total capacity provided by it, it would seem that the carrier in question offers 60% of its capacity for fifth freedom traffic which would not seem to be in accordance with the primary place the third and fourth freedom traffic should take. Yet considering that a transport service filled for 65 or 70 per cent is a commercially sound proposition, the average room available for fifth freedom traffic is no more than 25 or 30 per cent, which is only half the space seemingly offered at first sight.

This simple example may show that (air) transportation should not be approached in an arithmetical spirit but with wide open eyes both for the needs of the air carriers *and* those of the traveling public. That the authors of the original Bermuda principles limited themselves to broad lines and refrained from going into too precise details is an act of wisdom that cannot be overestimated. Too rigid an application of the close relationship-clause might also lead to the danger that the carrier in question would have to use types of aircraft of different capacity on different stages of a single route or aircraft especially adapted to the traffic requirements on each of the routes mentioned in the agreement.

Most airlines strive however for the sound commercial principle of standardizing their fleets to the greatest possible extent. Moreover for the sake of safe operation even on routes where smaller aircraft could be used in view of the traffic requirements, multi-engined aircraft, mostly therefore of a larger carrying capacity, should sometimes be used.

Although in some cases a change of gauge—which means that a further stage of a route is operated with aircraft of smaller capacity connecting with the heavier aircraft operating the initial and more important stage of that route—is applied, this does not occur very often.

Admittedly such a change of gauge may imply that the close relation clause can be applied more accurately. Such a change of gauge requires however that aircraft should be permanently stationed in foreign countries which can never be very profitable unless the traffic on that further stage is relatively heavy, because of which the frequency will be high enough to have these smaller aircraft making their normal share of flying hours. In other cases the aircraft in question—and their crews—would remain idle for long periods which only costs lots of money.

These different examples may show that the Bermuda principles closely bound up with the capacity to be provided can only work properly when traffic is such as to require a carrying capacity which is a multiple of the carrying capacity of a single normal modern aircraft, so that a certain number of frequencies is to be provided.

Only in this case the ex post facto review can be applied without endangering a certain minimum of operation which is necessary for an airline from an economic point of view. Only in case there is a rather important traffic the flexibility laid down in the broad Bermuda principles is done full justice. Care should therefore be taken that these principles are not applied too rigidly where traffic is only moderate as yet.

In this connection it should be recognized that most of the air routes mentioned in the original Bermuda agreement are trunkroutes on which heavy traffic was to be expected.

Furthermore the Bermuda agreement was probably drafted with a view to the future development of civil aviation with possibilities

hardly foreseeable at the time of its conclusion and still hardly foreseeable even now.

Effect of Geographic Situations

Another point which may influence the interpretation of the Bermuda principles is the geographical situation of the contracting parties. It goes without saying that the interpretation of these principles is much easier when they would apply to the operation of air services which have their starting point in one contracting country and their terminus in the other, than when the air carriers of both contracting parties or of one of them operate through services to countries beyond. In the first case the primary objective is the carriage of traffic between the two contracting parties and the fifth freedom traffic takes place between the territory of the other contracting party and one or more countries situated on the route.

If, however, the situation of one contracting state is such that it forms an intermediate landing point for the carrier of the other country it sometimes might be difficult to realize that the capacity provided by the air carrier of that other contracting country should be considered in relation to the operation of the *whole* of the route and not to that of the stage between the country and the home country of the carrier in question.

In such a situation the possibility exists without any doubt for the carrier in question to operate fifth freedom traffic not only on one or more stages of the route between the contracting parties but on the stages of the route to the countries beyond as well.

This more complicated situation arises especially on long routes with many intermediate stops. On such routes however the primary objective is not only the carriage between the home country of the air carrier and the other contracting state, but also the carriage between the home country and the various other countries where the airline calls and last but not least the carriage between the home country and the place where the air service finds its terminus.

To operate such routes economically, the requirements of through airline operation, i.e., the ability to pick up en route fifth freedom traffic to fill up vacant places, is a necessity. Perhaps later on when air traffic will have developed to full maturity the air carriers themselves may prefer to operate different services which run parallel to the initial stages on such routes, but which subsequently terminate at what are now only intermediate landing points. In such a system the carriage of fifth freedom traffic might become less important.

Although one could in a few cases already see indications of the commencement of this development, air transport is by no means on a level as yet where such a system could be generally applied. The carriage of fifth freedom traffic is therefore at present essential and should for this reason not be withheld from the operators of trunk services, though in operating such fifth freedom traffic the air carrier

should take account of local and regional services, as the Bermuda agreement rightly states.

Reasonableness of Bermuda Principles

Everything taken together it seems that the Bermuda principles—and such probably owing to the fact that they represent a compromise—have a sound conception of reasonableness as their basis. It seems, therefore, that these principles should be dealt with in a similar spirit. Only in this way can the limitations for which the Bermuda principles leave room be prevented from becoming impediments to the legitimate aspirations of the air carriers.

Let us not forget that another, and in fact the first item of the Final Act of the original Bermuda Agreement, reveals the desire "to foster and encourage the widest distribution of the benefits of air travel for the general good of mankind and to stimulate international air travel as a means of promoting friendly understanding and good will among peoples and ensuring the many indirect benefits of this new form of transportation to the common welfare of both countries."

When copying the Bermuda clauses as has been done in so many cases this statement of policy should be assumed too, for in the first and in the last place air transport has been created and is still further developed for the traveling public's sake.

THE WARSAW CONVENTION OF 1929, AS AMENDED BY THE PROTOCOL SIGNED AT THE HAGUE, ON SEPTEMBER 28, 1955

By K. M. Beaumont

C.B.E., D.S.O., M.A. Senior Partner, law firm of Beaumont & Son, London, England; an original Member of the Legal Committee of the I.A.T.A. and served on that Committee for abouty twenty years; a Member of the C.I.T.E.J.A. from 1945 until that Committee was superseded by the Legal Committee of the I.C.A.O., since when he has served as a member of the latter. Joint author, with C. N. Shawcross, K.C., M.P., of "Air Law," 1945.

AFTER working for more than three weeks at The Hague, delegations from forty-three States, assisted by observers from eight International Organizations, produced a Protocol which was signed immediately by delegates on behalf of twenty-six States. The Protocol provides for modification of the Convention in many material respects. In fact, the Conference swallowed even larger camels than had been proposed by the Legal Committee of I.C.A.O., at its meeting in Rio in September, 1953, while straining at gnats, represented by minor drafting revisions in the unamended portions of the Convention. In the result, the Convention as amended by the Protocol constitutes a greatly improved measure considerably longer than the Convention, though certain anomalies remain which could have been avoided if a few more drafting revisions had been made or if the combined documents had been consolidated into an entirely new Convention. However, there has for some time been determined opposition by certain States to a new Convention, partly because these considered that it would be easier for the legislatures of the States concerned to adopt a modifying Protocol; and at The Hague there was not enough time to consider properly a number of possible modifications which fell outside the scope of the draft Protocol prepared by the Legal Committee.

In the opinion of the writer, who has for about twenty years been intimately concerned with proposals for revision of the Convention, the amendments comprised in the Protocol are sound, practical and wise. As these were, on the whole, adopted by considerable majorities, is it to be hoped that not too long a time will elapse before the Convention as amended by the Protocol comes into operation, for which, however, ratification by thirty States is required, this being two-thirds of the number of States which are now High Contracting Parties to the Convention.

In order to make comprehensible the following commentary, there is annexed hereto a consolidated document setting out the Convention as it would appear when the Protocol amendments are included or

added. It must be remembered that the unamended portions of the Convention remain officially in the French language only, whereas the Protocol is in English, French and Spanish, with the French text to prevail in the event of inconsistency.

ARTICLE 1 (1). Although it was pointed out that this paragraph refers to "persons" instead of "passengers," as used elsewhere, and to "luggage or goods," whereas the Protocol refers to "baggage" and "cargo," the Conference decided to make no change so as to assimilate the expressions, partly no doubt because in the French text of both documents the words "baggages" and "merchandises" are used.

ART. 1 (2) has been redrafted, substituting "agreement" for "contract," eliminating reference to "Sovereignty, Suzerainty, Mandate or Authority," and substituting "State" for "Power." (On this subject see also new Article 40A of the Convention and Final Clauses of the Protocol.)

ART. 1 (3). Similar corresponding changes were made in this paragraph.

ART. 2 (2). This was changed to include all mail and postal packages without qualification.

As the first chapter of the Convention is headed "Scope—Definitions," it would have seemed proper to include the new Article 40A in this, because 40A contains only definitions; and it might have been advantageous to include also in Article 2 an assimilation of the expressions "air consignment note" and "air way bill," "luggage ticket" and "baggage check"; and perhaps a definition of "carrier," since this has created difficulty—for instance whether the party who makes the contract to carry or the party who operates the contracted carriage should be so regarded. The answer to this question may not always be easy, especially in connection with certain charter arrangements. Article 30 of the Convention clarifies the position only as to who is to be liable (as distinct from who has to be regarded as the carrier) in the case of carriage by successive carriers. In the Paris draft of January, 1952, a definition of "carrier" was suggested. Although the writer considers that definitions are desirable and useful in an international document, some of his good friends and colleagues on the Legal Committee of I.C.A.O. are fiercely opposed to them. The Conference really did not have time to consider whether some definitions and assimilations, as referred to above, should be included, apart from those comprised in the new Article 40A. Differences between expressions used in the Convention and in the Protocol can probably be cleared up in the enabling legislation of most States which ratify the Protocol, at any rate in cases where enabling legislation is required, as is usual.

ART. 3 (1). The Protocol substitutes a completely new paragraph, requiring only the places of departure and destination and, if necessary, an agreed stopping place, to be mentioned, in order to establish whether or not the carriage is "international," as defined by the Convention. In addition a notice must be included in the ticket to the

effect that the Convention may apply and that the Carriers' liability may be limited. Many delegations attached great importance to such a notice which, in the form set out in the Protocol, should give no trouble to Carriers.

ART. 3 (2) is entirely new, and clears up anomalies and obscurities in the corresponding paragraph of the Convention. Under the new provision, the carrier loses the benefit of the limited liability under Article 22 if he allows a passenger to embark without a ticket or if the ticket does not include the notice above referred to. He remains entitled to his defenses under the Convention.

ART. 4. The Protocol substitutes provisions concerning the baggage check exactly similar to those referred to above in connection with the passenger ticket.

ART. 5. No change was made in this, although the English text makes specific reference to an "air consignment note" being required, and the Protocol refers throughout to an air way-bill. This Article also appears to involve a certain conflict with Article 33, when the former talks about the consignor having a right to require the carrier to accept the document, whereas Article 33 entitles the Carrier to refuse to enter into any contract of carriage. Presumably the intention is that the consignor can only require the carrier to accept the document when a contract of carriage is agreed with the Carrier.

ART. 6 (3). The amended paragraph in the Protocol clears up a practical difficulty. The Carrier is no longer required to sign on acceptance of the cargo, which is often impossible when this is collected by an Agent. Under the new paragraph, he merely has to sign before the cargo is loaded on the aircraft.

ART. 8 of the Convention, with its numerous obligatory and other particulars has been substituted in the Protocol by simple provisions corresponding exactly with those applicable to the passenger ticket and baggage check.

ART. 9 has been amended by the Protocol in a manner corresponding with Articles 3 and 4, and the amendment in Article 6 (3).

ART. 10 (2). The Protocol provides a redraft and amplification of this paragraph.

ARTS. 11, 12, 13 and 14 have not been amended. At one time it was thought that the right of stoppage *in transitu* comprised in Article 12 constituted an obstacle to making the air way-bill negotiable because of the use of the word "varied" in Article 15 (2). But, when the matter was considered by the Sub-Committee of the Legal Committee constituted for the purpose, it was pointed out that the word used in the French text was "dérogeant," which would cover complete derogation of Articles 12, 13 and 14; and the Conference accepted the opinion of the Sub-Committee that there is in fact nothing in the Convention which precludes the air way-bill being made negotiable and the provisions of Articles 12, 13 and 14 being varied *or eliminated*.

ART. 15. The Protocol added a new paragraph (3) to place upon record the opinion referred to above.

ART. 17 was not altered by the Protocol, although (a) the expression "wounding of a passenger or any other bodily injury suffered by a passenger" has been subject to considerable criticism. It has been pointed out that, in addition to mental injuries, there are possible, in air travel, injuries which cannot be called bodily injuries; also (b) the word "accident" might not cover such occurrences as loss of pressure or bumps. Consequently some delegates would have preferred to change the paragraph to read "in the event of the death of or injury to a passenger, if the occurrence which caused the damage . . . etc." It should be noted that the word "occurrence" is used in Article 18 (1), and the word "event" in Article 18 (3). It should be noted that Article 18 (1) makes reference only to registered baggage or goods, omitting reference to hand baggage.

ART. 19 was also left unaltered, although its meaning is obscure, since there is no definition as to what constitutes delay, and consequently, this must be left to the Courts, which, in different countries, may apply conflicting definitions. The Paris draft of January, 1952, included provisions on the subject, which, however, were rejected by the Legal Committee in Rio, and the Conference at The Hague was unwilling throughout the meeting to consider questions which were not included in the draft Protocol prepared in Rio, partly because it was felt that the time available would not suffice.

ART. 20 (1). Once again this paragraph was considered, and once again no revision proposed obtained the required majority although it is obvious that, if all "necessary" measures are proved to have been taken, the damage could not have occurred. Suggestions were again made that "reasonable" or "proper" or "practicable" should be substituted for "necessary," and that "impracticable" should be substituted for "impossible," but without success; so it still rests with the Courts to endeavor to make sense out of a paragraph which, if read literally, makes nonsense.

ART. 20 (2) is deleted by the Protocol, so that the same rule for disproving liability now prevails for baggage and cargo as for passengers. This is obviously sensible because most aircraft carry baggage or cargo as well as passengers.

ART. 21 was left unamended, although it would seem that the formula comprised in Article 6 (1) of the Rome Convention of 1952, is much clearer, and leaves less chance of conflicting decisions being given in the Courts of different States on the subject of contributory negligence.

ART. 22 was replaced in the Protocol by a new Article. In paragraph (1) the limit of passenger liability was doubled to the figure of 250,000 francs. The expression "Court seised of the case," although bad English, was retained, instead of "Court trying the action." In paragraph (2), the expression "special declaration of value at delivery"

was changed to read "special declaration of interest in delivery at destination." The latter is a correct translation of the meaning of the French text; and the alteration is very necessary because one distinguished observer expressed the view that "value at delivery" meant delivery to the Carrier, which is certainly not the meaning of the French text, which expresses a well-known principle. As the French word "expediteur" means both passenger and consignor, it was necessary in the Protocol to use both words in the English text, whereas in the Convention only the word "consignor" appears, without reference to the passenger, although baggage as well as cargo is involved.

The Protocol also includes a new paragraph (2) (b), to deal with cases of partial loss of registered baggage and cargo, concerning which at present different principles are applied by different carriers.

The Protocol also includes an entirely new paragraph (4) providing for the award of certain Court costs and other litigation expenses. This suggestion emanated from the United States delegation, consequent upon difficulties in this connection which exist in American Courts.

The Protocol also provides that an award of Court costs and other expenses of litigation may not be made if, within a period of six months from the date of the occurrence causing the damage, or the commencement of the action, whichever is the latter, a sum in settlement of the claim has been offered by the Carrier in writing at least as great as the damages awarded. This in effect applies the principle of payment into Court, in order to avoid payment of the Plaintiffs' costs, which is well known in the English legal system.

Paragraph (5) incorporated in Article 22 by the Protocol establishes the principle of Article 11 (4) of the Rome Convention of 1952.

ART. 23. The Protocol has added a new paragraph so as to render the existing Article 23 inapplicable when the damage results from inherent defect, quality or vice of the cargo carried, thereby applying the principle of the Brussels Maritime Convention of 1924.

ART. 25. The Protocol includes an entirely new Article, which eliminates the difficulties experienced by the use of the word "dol" (willful misconduct) or its equivalent, which has been held in certain Courts to mean "faute lourde" (gross negligence). The new formula follows closely the definition of "willful misconduct," as laid down by Courts applying English Law, and includes the notion of recklessness with knowledge that damage would probably result. In order to make the Carrier liable without limit for the act or omission of his servant or agent, it must also be proved that he was acting within the scope of his employment, but not within the scope of his authority, as prescribed by Article 12 of the Rome Convention of 1952. The Protocol makes much clearer an important legal principle. It should be noted also that the new Article refers only to the limits of liability specified in Article 22, whereas the existing Article refers to "the provisions of this Convention which exclude or limit" the liability of the carrier,

presumably including such provisions as those appearing in Articles 26 and 29.

ART. 25A. The Protocol includes an entirely new Article which has the effect of enabling a servant or agent, acting within the scope of his employment, to avail himself of the same limits of liability as those applicable to a carrier. Some experts have considered that the limits in Article 22 are already applicable to servants and agents, although the carrier alone is mentioned therein. Others contend that these limits are not applicable to servants or agents, who consequently can be sued separately in tort or delict without limit. In some cases, servants and agents are indemnified against such claims in their employment agreements. In such cases, the carrier, though himself not liable, might have to pay unlimited compensation on behalf of a servant or agent. The new Article 25A sets at rest doubts on this subject and regularizes the position.

The Sub-Committee of the Legal Committee constituted to study questions arising from hire and charter of aircraft suggested that, after Article 25, there should be inserted a new provision as follows:

> "Subject to the provisions of Article 30, when the air carriage is performed by a person other than the one in whose name the agreement to carry was concluded, each of such persons shall be jointly and severally liable as a Carrier in accordance with the provisions of the Convention. Nevertheless, if only one of such persons is liable under Article 25, the excess above the limits comprised in Article 22 shall be recoverable only from that person."

This formula follows closely one included in the Paris draft of 1952, and constitutes an attempt to give protection to passengers and owners of cargo in the circumstances mentioned, which may arise in cases where the contracting party charters space in an aircraft operated by another. Provided that the liability is covered by insurance, no hardship could result for either of such parties. However, the Conference rejected the proposal. It is curious that, whereas Article 30 deals with the question of liability in the case of successive carriers, and refers to certain carriers as being deemed to be contracting parties, the Convention nowhere makes clear who is to be regarded as the carrier in the case of charters, or indeed, where successive carriage is involved.

ART. 26. The writer made a determined effort to persuade the Conference to adopt an entirely new Article on the lines proposed in the Paris draft of 1952, pointing out the deficiencies of the present Article, including omission of the notice of claim to be given in the case of death or personal injury, and that no period is mentioned for lodging claims when baggage (registered or hand) or cargo is lost or destroyed or cannot be found. Paragraph (2) refers only to date of receipt or when it is placed at the disposal of the passenger or consignee. However, the Conference would not agree to make any change until Article 35 came to be discussed, and an extraordinary resolution

(subsequently revoked) dealing with "working days," regardless of the fact that this expression has a different meaning in every country and sometimes several different meanings in the same country. Eventually it was decided to leave Article 35 alone, but to alter paragraph (2) of Article 26, changing three, seven and fourteen days mentioned therein to seven, fourteen and twenty-one days respectively.

ART. 29. Although the formulae comprised in Article 21 of the Rome Convention of 1952, would seem to be preferable to those in the existing Convention of Warsaw, no change was made in this Article. This was one of the cases in which the Conference refused to consider a matter, partly because it was not referred to in the Rio draft Protocol and partly because there was too little time.

ART. 34 was replaced by an entirely new Article in the Protocol, omitting the reference to experimental trials with a view to the establishment of a regular air line.

ARTS. 36 to 41 were left unamended. But, after the Protocol comes into force, as provided in Article XXII of the Protocol, these Articles will be ineffective and overriden by the Final Clauses of the Protocol.

ART. 40A. This new Article has already been referred to. It merely defines "High Contracting Party" and "territory," and might have been included in Chapter I which purports to include definitions.

CHAPTERS II AND III OF THE PROTOCOL (ARTICLES XVIII TO XXVII)

These are entirely new and relate only to the Protocol and not to the Convention. Article XVIII substitutes "parties to the Protocol" for "High Contracting Parties." Article XIX provides that the Convention and the Protocol (when in force) are to be read as a single instrument to be known as the *Warsaw Convention as amended at The Hague, 1955.*

Article XXI provides that ratification of the Protocol by any State not a party to the Convention shall have effect as adherence to the Convention as amended by the Protocol; and also for the deposit of instruments of ratification with the Government of the People's Republic of Poland. At one stage, this latter provision looked like causing a certain amount of trouble, because there had been an alternative proposal that deposits should be made with I.C.A.C. However, eventually the proposal was adopted by twelve votes to three, with many abstentions; and so diplomatic tension was relieved and the result was suitably celebrated at subsequent appropriate cocktail parties.

PROTOCOL ART. XXII requires thirty ratifications before the Protocol comes into force, ninety days after the 30th ratification. As, however, the amendments were generally supported by large majorities, there is reason to hope that the Protocol may become effective before very long.

ART. XXIII follows the lines of Article XXI, and Articles XXIV and XXV are normal Final Clauses for modern Conventions.

ART. XXVI of the Portocol precludes reservations except concerning aircraft the whole capacity of which is reserved by or on behalf of military authorities. A provision to this effect had originally been proposed for incorporation in Article 2.

A technical difficulty may arise consequent upon the fact that ninety days after a State ratifies the Protocol it is bound thereby, whereas under Article 39 of the Convention, denunciation thereof only becomes effective after six months. Therefore, there is a possibility that a State, already a party to the Convention, by ratifying the Protocol, might, for a period between ninety days and six months, be in breach of the Convention. No difficulty need arise after the Protocol comes into force through ratification or adherence of thirty States, because then a Contracting State of the Convention could denounce this, and, ninety days before the expiry of six months, ratify or adhere to the Protocol, so that the expiry of the denunciation of the Convention would coincide with ratification of the Protocol becoming effective. But, if a Convention State wants to ratify the Protocol before it is in force – so as to become one of the first thirty Protocol States – there is an obvious difficulty. If that State denounces the Convention, and, at the end of six months, there are not thirty Protocol States, the State concerned, even if it had ratified the Protocol ninety days before the denunciation has become effective, would be bound neither by the Convention nor by the Convention as amended by the Protocol, when the denunciation of the Convention became effective. This difficulty did not seem to trouble those delegates who appreciated it. Probably arrangements could be made for a number of States, not less than thirty, all to denounce the Convention at the same time, and all to ratify the Protocol ninety days before the denunciation of the Convention becomes effective.

The attestation clause of the Protocol provides that it is drawn up in three authentic texts in the English, French and Spanish languages, and that in case of any inconsistency, the text in the French language in which the Convention was drawn shall prevail.

Considering the very large number of States represented at the Conference, the exceptionally large number of delegates, many of whom had not previously attended a meeting dealing with the subject matter, the limited time available and the complexity of some of the problams involved, it was remarkable that such a large measure of agreement was reached and that so many useful and practical amendments to the Convention were adopted.

In conclusion, perhaps the writer may be excused for adding that, at the end of the meeting, he was particularly touched by and appreciative of the remarks, however undeserved, of his old friend and colleague, Maitre Garnault, to the effect that it was largely due to the

writer's efforts, in various capacities over a period of about twenty years, that the results comprised in the Protocol had been achieved.

THE CONVENTION OF WARSAW OF 12TH OCTOBER, 1929, AS AMENDED BY THE HAGUE PROTOCOL OF 28TH SEPTEMBER, 1955

[English Text. The new and amended provisions are in italics. The English text of the unamended provisions is that Scheduled to the Carriage by Air Act, 1932. The unofficial American text differs from this in certain respects.]

CHAPTER I — SCOPE — DEFINITIONS

Article 1

(1) This Convention applies to all international carriage of persons, luggage or goods performed by aircraft for reward. It applies equally to gratuitous carriage by aircraft performed by an air transport undertaking.

(2) *For the purpose of this Convention, the expression international carriage means any carriage in which, according to the agreement between the parties, the place of departure and the place of destination, whether or not there is a break in the carriage or a transhipment, are situate either within the territories of two High Contracting Parties or within the territory of a single High Contracting Party if there is an agreed stopping place within the territory of another State, even if that State is not a High Contracting Party. Carriage between two points within the territory of a single High Contracting Party without an agreed stopping place within the territory of another State is not international carriage for the purposes of this Convention.*

(3) *Carriage to be performed by several successive air carriers is deemed, for the purposes of this Convention, to be one undivided carriage if it has been regarded by the parties as a single operation, whether it has been agreed upon under the form of a single contract or of a series of contracts, and it does not lose its international character merely because one contract or a series of contracts is to be performed entirely within the territory of the same State.*

Article 2

(1) This Convention applies to carriage performed by the State or by legally constituted public bodies provided it falls within the conditions laid down in Article 1.

(2) *This Convention shall not apply to carriage of mail and postal packages.*

CHAPTER II — DOCUMENTS OF CARRIAGE

SECTION 1 — PASSENGER TICKET

Article 3

(1) *In respect of the carriage of passengers a ticket shall be delivered containing:*

(*a*) *An indication of the places of departure and destination;*

(*b*) *If the places of departure and destination are within the territory of a single High Contracting Party, one or more agreed stopping places being within the territory of another State, an indication of at least one such stopping place;*

(*c*) *A notice to the effect that, if the passenger's journey involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention may be applicable and that the Convention governs and in most cases limits the liability of*

carriers for death or personal injury and in respect of loss of or damage to baggage.

(2) *The passenger ticket shall constitute prima facie evidence of the conclusion and the conditions of the contract of carriage. The absence, irregularity or loss of the passenger ticket does not affect the existence or the validity of the contract of carriage which shall, none the less, be subject to the rules of this Convention. Nevertheless, if, with the consent of the carrier, the passenger embarks without a passenger ticket having been delivered, or if the ticket does not include the notice required by paragraph (1) (c) of this Article, the carrier shall not be entitled to avail himself of the provisions of Article 22.*

SECTION 2 — LUGGAGE TICKET

Article 4

(1) *In respect of the carriage of registered baggage, a baggage check shall be delivered, which, unless combined with or incorporated in a passenger ticket which complies with the provisions of Article 3, paragraph (1), shall contain:*

(a) *A indication of the places of departure and destination;*

(b) *If the places of departure and destination are within the territory of a single High Contracting Party, one or more agreed stopping places being within the territory of another State, an indication of at least one such stopping place;*

(c) *A notice to the effect that, if the carriage involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention may be applicable and that the Convention governs and in most cases limits the liability of carriers in respect of loss of or damage to baggage.*

(2) *The baggage check shall constitute prima facie evidence of the registration of the baggage and of the conditions of the contract of carriage. The absence, irregularity or loss of the baggage check does not affect the existence or the validity of the contract of carriage which shall, none the less, be subject to the rules of this Convention. Nevertheless, if the carrier takes charge of the baggage without a baggage check having been delivered of if the baggage check (unless combined with or incorporated in the passenger ticket which complies with the provisions of Article 3 paragraph (1) (c)) does not include the notice required by paragraph (1) (c), he shall not be entitled to avail himself of the provisions of Article 22 paragraph (2).*

SECTION 3 — AIR CONSIGNMENT NOTE

Article 5

(1) Every carrier of goods has the right to require the consignor to make out and hand over to him a document called an "air consignment note"; every consignor has the right to require the carrier to accept this document.

(2) The absence, irregularity or loss of this document does not affect the existence or the validity of the contract of carriage which shall, subject to the provisions of Article 9, be none the less governed by the rules of this Convention.

Article 6

(1) The air consignment note shall be made out by the consignor in three original parts and be handed over with the goods.

(2) The first part shall be marked "for the carrier" and shall be signed by the consignor. The second part shall be marked "for the consignee"; it shall be signed by the consignor and by the carrier and shall accompany

the goods. The third part shall be signed by the carrier and handed by him to the consignor after the goods have been accepted.

(3) *The carrier shall sign prior to the loading of the cargo on board the aircraft.*

(4) The signature of the carrier may be stamped; that of the consignor may be printed or stamped.

(5) If, at the request of the consignor, the carrier makes out the air consignment note, he shall be deemed, subject to proof to the contrary, to have done so on behalf of the consignor.

Article 7

The carrier of goods has the right to require the consignor to make out separate consignment notes when there is more than one package.

Article 8

The air way-bill shall contain:

(*a*) *An indication of the places of departure and destination;*

(*b*) *If the places of departure and destination are within the territory of a single High Contracting Party, one or more agreed stopping places being within the territory of another State, an indication of at least one such stopping place;*

(*c*) *A notice to the consignor to the effect that, if the carriage involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention may be applicable and that the Convention governs and in most cases limits the liability of carriers in respect of loss of or damage to cargo.*

Article 9

If, with the consent of the Carrier, cargo is loaded on board the aircraft without an air way-bill having been made out, or if the air way-bill does not include the notice required by Article 8, paragraph (c), the carrier shall not be entitled to avail himself of the provisions of Article 22, paragraph (2).

Article 10

(1) The consignor is responsible for the correctness of the particulars and statements relating to the goods which he inserts in the air consignment note.

(2) *The consignor shall indemnify the carrier against all damage suffered by him, or by any other person to whom the carrier is liable, by reason of the irregularity, incorrectness or incompleteness of the particulars and statements furnished by the consignor.*

Artilce 11

(1) The air consignment note is *prima facie* evidence of the conclusion of the contract, of the receipt of the goods and of the conditions of carriage.

(2) The statements in the air consignment note relating to the weight, dimensions and packing of the goods, as well as those relating to the number of packages, are *prima facie* evidence of the facts stated; those relating to the quantity, volume and condition of the goods do not constitute evidence against the carrier except so far as they both have been, and are stated in the air consignment note to have been, checked by him in the presence of the consignor, or relate to the apparent condition of the goods.

Article 12

(1) Subject to his liability to carry out all his obligations under the contract of carriage, the consignor has the right to dispose of the goods by withdrawing them at the aerodrome of departure or destination, or by stop-

ping them in the course of the journey on any landing, or by calling for them to be delivered at the place of destination or in the course of the journey to a person other than the consignee named in the air consignment note, or by requiring them to be returned to the aerodrome of departure. He must not exercise this right of disposition in such a way as to prejudice the carrier or other consignors and he must repay any expenses occasioned by the exercise of this right.

(2) If it is impossible to carry out the orders of the consignor the carrier must so inform him forthwith.

(3) If the carrier obeys the orders of the consignor for the disposition of the goods without requiring the production of the part of the air consignment note delivered to the latter, he will be liable, without prejudice to his right of recovery from the consignor, for any damage sustained which may be caused thereby to any person who is lawfully in possession of that part of the air consignment note.

(4) The right conferred on the consignor ceases at the moment when that of the consignee begins in accordance with Article 13. Nevertheless, if the consignee declines to accept the consignment note or the goods, or if he cannot be communicated with, the consignor resumes his right of disposition.

Article 13

(1) Except in the circumstances set out in the preceding Article, the consignee is entitled, on arrival of the goods at the place of destination, to require the carrier to hand over to him the air consignment note and to deliver the goods to him, on payment of the charges due and on complying with the conditions of carriage set out in the air consignment note.

(2) Unless it is otherwise agreed, it is the duty of the carrier to give notice to the consignee as soon as the goods arrive.

(3) If the carrier admits the loss of the goods, or if the goods have not arrived at the expiration of seven days after the date on which they ought to have arrived, the consignee is entitled to put into force against the carrier the rights which flow from the contract of carriage.

Article 14

The consignor and the consignee can respectively enforce all the rights given them by Articles 12 and 13, each in his own name, whether he is acting in his own interest or the interest of another, provided that he carries out the obligations imposed by the contract.

Article 15

(1) Articles, 12, 13 and 14, do not affect either the relations of the consignor or the consignee with each other or the mutual relations of third parties whose rights are derived either from the consignor or the consignee.

(2) The provisions of Articles 12, 13 and 14, can only be varied by express provision in the air consignment note.

(3) *Nothing in this Convention prevents the issue of a negotiable air way-bill.*

Article 16

(1) The consignor must furnish such information and attach to the air consignment note such documents as are necessary to meet the formalities of customs, octroi or police before the goods can be delivered to the consignee. The consignor is liable to the carrier for any damage occasioned by the absence, insufficiency or irregularity of any such information or documents, unless the damage is due to the fault of the carrier or his agents.

(2) The carrier is under no obligation to inquire into the correctness or sufficiency of such information or documents.

CHAPTER III — LIABILITY OF THE CARRIER

Article 17

The carrier is liable for damage sustained in the event of the death or wounding of a passenger or other bodily injury suffered by a passenger, if the accident which caused the damage so sustained took place on board the aircraft or in the course of any of the operations of embarking or disembarking.

Article 18

(1) The carrier is liable for damage sustained in the event of the destruction or loss of, or damage to, any registered luggage or any goods, if the occurrence which caused the damage so sustained took place during the carriage by air.

(2) The carriage by air within the meaning of the preceding paragraph comprises the period during which the luggage or goods are in charge of the carrier, whether in an aerodrome or on board an aircraft, or, in the case of a landing outside an aerodrome, in any place whatsoever.

(3) The period of the carriage by air does not extend to any carriage by land, by sea or by river performed outside an aerodrome. If, however, such a carriage takes place in the performance of a contract for carriage by air, for the purpose of loading, delivery or trans-shipment, any damage is presumed, subject to proof to the contrary, to have been the result of an event which took place during the carriage by air.

Article 19

The carrier is liable for damage occasioned by delay in the carriage by air of passengers, luggage or goods.

Article 20

(1) The carrier is not liable if he proves that he and his agents have taken all necessary measures to avoid the damage or that it was impossible for him or them to take such measures. [*paragraph* (2) *is omitted*]

Article 21

If the carrier proves that the damage was caused or contributed to by the negligence of the injured person the Court may, in accordance with the provisions of its own law, exonerate the carrier wholly or partly from his liability.

Article 22

(1) *In the carriage of persons the liability of the carrier for each passenger is limited to the sum of two hundred and fifty thousand francs. Where, in accordance with the law of the Court seised of the case, damages may be awarded in the form of periodical payments, the equivalent capital sum of the said payments shall not exceed two hundred and fifty thousand francs. Nevertheless, by special contract, the carrier and the passenger may agree to a higher limit of liability.*

(2) (*a*) *In the carriage of registered baggage and cargo, the liability of the carrier is limited to a sum of two hundred and fifty francs per kilogramme, unless the passenger or consignor has made, at the time when the package was handed over to the carrier, a special declaration of interest in delivery at destination and has paid a supplementary sum if the case so requires. In that case, the carrier shall be liable to pay a sum not exceeding the declared sum, unless he proves that that sum is greater than the passenger's or consignor's actual interest in delivery at destination.*

(*b*) *In the case of loss, damage or delay of part of registered baggage or cargo, or any object contained therein, the weight to be taken into consideration in determining the amount to which the carrier's liability is*

limited shall be only the total weight of the package or packages concerned. Nevertheless, when the loss, damage or delay of a part of the registered baggage or cargo, or of an object contained therein, affects the value of other packages covered by the same baggage check or the same air way-bill, the total weight of such package or packages shall also be taken into consideration in determining the limit of liability.

(3) *As regards objects of which the passenger takes charge himself the liability of the carrier is limited to five thousand francs per passenger.*

(4) *The limits prescribed in this Article shall not prevent the Court from awarding, in accordance with its own law, in addition, the whole or part of the Court costs and of the other expenses of the litigation incurred by the Plaintiff. The foregoing provision shall not apply if the amount of the damages awarded, excluding Court costs and other expenses of the litigation, does not exceed the sum which the carrier has offered in writing to the Plaintiff within a period of six months from the date of the occurrence causing the damage, or before the commencement of the action, if that is later.*

(5) *The sums mentioned in francs in this Article shall be deemed to refer to a currency unit consisting of sixty five and a half milligrammes of gold of millesimal fineness nine hundred. These sums may be converted into national currencies in round figures. Conversion of the sums into national currencies other than gold shall, in case of judicial proceedings, be made according to the gold value of such currencies at the date of the judgment.*

Article 23

(1) Any provision tending to relieve the carrier of liability or to fix a lower limit than that which is laid down in this Convention shall be null and void, but the nullity of any such provision does not involve the nullity of the whole contract, which shall remain subject to the provisions of this Convention.

(2) *Paragraph (1) of this Article shall not apply to provisions governing loss or damage resulting from the inherent defect, quality or vice of the cargo carried.*

Article 24

(1) In the cases covered by Articles 18 and 19 any action for damages, however founded, can only be brought subject to the conditions and limits set out in this Convention.

(2) In the cases covered by Article 17 the provisions of the preceding pararaph also apply, without prejudice to the questions as to who are the persons who have the right to bring suit and what are their respective rights.

Article 25

The limits of liability specified in Article 22 shall not apply if it is proved that the damage resulted from an act or omission of the carrier, his servants or agents, done within intent to cause damage or recklessly and with knowledge that damage would probably result; provided that, in the case of such act or omission of a servant or agent, it is also proved that he was acting within the scope of his employment.

Article 25A

(1) *If an action is brought against a servant or agent of the carrier arising out of damage to which this Convention relates, such servant or agent, if he proves that he acted within the scope of his employment, shall be entitled to avail himself of the limits of liability which that carrier himself is entitled to invoke under Article 22.*

(2) *The aggregate of the amounts recoverable from the carrier, his servants and agents, in that case, shall not exceed the said limits.*

(3) *The provisions of paragraphs (1) and (2) of this Article shall not apply if it is proved that the damage resulted from an act or omission of the servant or agent done with intent to cause damage or recklessly and with knowledge that damage would probably result.*

Article 26

(1) Receipt by the person entitled to delivery of luggage or goods without complaint is *prima facie* evidence that the same have been delivered in good condition and in accordance with the document of carriage.

(2) *In the case of damage, the person entitled to delivery must complain to the carrier forthwith after discovery of the damage, and, at the latest, within seven days from the date of receipt in the case of baggage and fourteen days from the date of receipt in the case of cargo. In the case of delay, the complaint must be made at the latest within twenty-one days from the date on which the baggage or cargo have been placed at his disposal.*

(3) Every complaint must be made in writing upon the document of carriage or by separate notice in writing despatched within the times aforesaid.

(4) Failing complaint within the times aforesaid, no action shall lie against the carrier, save in the case of fraud on his part.

Article 27

In the case of the death of the person liable, an action for damages lies in accordance with the terms of this Convention against those legally representing his estate.

Article 28

(1) An action for damages must be brought at the option of the plaintiff in the territory of one of the High Contracting Parties, either before the Court having jurisdiction where the carrier is ordinarily resident, or has his principal place of business, or has an establishment by which the contract has been made or before the Court having jurisdiction at the place of destination.

(2) Questions of procedure shall be governed by the law of the Court seised of the case.

Article 29

(1) The right to damages shall be extinguished if an action is not brought within two years, reckoned from the date of arrival at the destination, or from the date on which the aircraft ought to have arrived, or from the date on which the carriage stopped.

(2) The method of calculating the period of limitation shall be determined by the law of the Court seised of the case.

Article 30

(1) In the case of carriage to be performed by various successive carriers and falling within the definition set out in the third paragraph of Article 1, each carrier who accepts passengers, luggage or goods is subjected to the rules set out in this Convention, and is deemed to be one of the Contracting parties to the contract of carriage in so far as the contract deals with that part of the carriage which is performed under his supervision.

(2) In the case of carriage of this nature, the passenger or his representative can take action only against the carrier who performed the carriage during which the accident or the delay occurred, save in the case where, by express agreement, the first carrier has assumed liability for the whole journey.

(3) As regards luggage or goods, the passenger or consignor will have a right of action against the first carrier, and the passenger or consignee

who is entitled to delivery will have a right of action against the last carrier, and further, each may take action against the carrier who performed the carriage during which the destruction, loss, damage or delay took place. These carriers shall be jointly and severally liable to the passenger or to the consignor or consignee.

CHAPTER IV — PROVISIONS RELATING TO COMBINED CARRIAGE

Article 31

(1) In the case of combined carriage performed partly by air and partly by any other mode of carriage, the provisions of this Convention apply only to the carriage by air, provided that the carriage by air falls within the terms of Article 1.

(2) Nothing in this Convention shall prevent the parties in the case of combined carriage from inserting in the document of air carriage conditions relating to other modes of carriage, provided that the provisions of this Convention are observed as regards the carriage by air.

CHAPTER V — GENERAL AND FINAL PROVISIONS

Article 32

Any clause contained in the contract and all special agreements entered into before the damage occurred by which the parties purport to infringe the rules laid down by this Convention, whether by deciding the law to be applied, or by altering the rules as to jurisdiction, shall be null and void. Nevertheless, for the carriage of goods arbitration clauses are allowed, subject to this Convention, if the arbitration is to take place within one of the jurisdictions referred to in the first paragraph of Article 28.

Article 33

Nothing in this Convention shall prevent the carrier either from refusing to enter into any contract of carriage, or from making regulations which do not conflict with the provisions of this Convention.

Article 34

The provisions of Articles 3 to 9 inclusive relating to documents of carriage shall not apply in the case of carriage performed in extraordinary circumstances outside the normal scope of an air carrier's business.

Article 35

The expression "days" when used in this Convention means current days not working days.

Article 36

This Convention is drawn up in French in a single copy which shall remain deposited in the archives of the Ministry for Foreign Affairs of Poland and of which one duly certified copy shall be sent by the Polish Government to the Government of each of the High Contracting Parties.

Article 37

(1) This Convention shall be ratified. The instruments of ratification shall be deposited in the archives of the Ministry for Foreign Affairs of Poland, which will notify the deposit to the Government of each of the High Contracting Parties.

(2) As soon as this Convention shall have been ratified by five of the High Contracting Parties it shall come into force as between them on the ninetieth day after the deposit of the fifth ratification. Thereafter it shall come into force between the High Contracting Parties who shall have rati-

fied and the High Contracting Party who deposits his instrument of ratification on the ninetieth day after the deposit.

(3) It shall be the duty of the Government of the Republic of Poland to notify to the Government of each of the High Contracting Parties the date on which this Convention comes into force as well as the date of the deposit of each ratification.

Article 38

(1) This Convention shall, after it has come into force, remain open for accession by any State.

(2) The accession shall be effected by a notification addressed to the Government of the Republic of Poland, which will inform the Government of each of the High Contracting Parties thereof.

(3) The accession shall take effect as from the ninetieth day after the notification made to the Government of the Republic of Poland.

Article 39

(1) Any one of the High Contracting Parties may denounce this Convention by a notification addressed to the Government of the Republic of Poland, which will at once inform the Government of each of the High Contracting Parties.

(2) Denunciation shall take effect six months after the notification of denunciation, and shall operate only as regards the party who shall have proceeded to denunciation.

Article 40

(1) Any High Contracting Party may, at the time of signature or of desposit of ratification or of accession declare that the acceptance which he gives to this Convention does not apply to all or any of his colonies, protectorates, territories under mandate, or any other territory subject to his sovereignty or his authority, or any territory under his suzerainty.

(2) Accordingly any High Contracting Party may subsequently accede separately in the name of all or any of his colonies, protectorates, territories under mandate, or any other territory subject to his sovereignty or to his authority, or any territory under his suzerainty, which have been thus excluded by his original declaration.

(3) Any High Contracting Party may denounce this Convention in accordance with its provisions, separately or for all or any of his colonies, protectorates, territories under mandate, or any other territory under his suzerainty.

Article 40A

(1) *In Article 37, paragraph* (2) *and Article 40, paragraph* (1), *the expression High Contracting Party shall mean State. In all other cases, the expression High Contracting Party shall mean a State whose ratification of or adherence to the Convention has become effective and whose denunciation thereof has not become effective.*

(2) *For the purposes of the Convention the word territory, means not only the metropolitan territory of a State but also all other territories for the foreign relations of which that State is responsible.*

Article 41

Any High Contracting Party shall be entitled not earlier than two years after the coming into force of this Convention to call for the assembling of a new international Conference in order to consider any improvements which may be made in this Convention. To this end he will communicate with the Government of the French Republic which will take the necessary measures to make preparations for such Conference.

ADDITIONAL PROTOCOL
(With reference to Article 2)

The High Contracting Parties reserve to themselves the right to declare at the time of ratification or of accession that the first paragraph of Article 2 of this Convention shall not apply to international carriage by air performed directly by the State, its colonies, protectorates or mandated territories or by any other territory under its sovereignty, suzerainty or authority.

ADDITIONAL PROVISIONS COMPRISED IN THE HAGUE PROTOCOL OF 28TH SEPTEMBER, 1955

CHAPTER II

Scope of application of the Convention as amended

Article XVIII

The Convention as amended by this Protocol shall apply to international carriage as defined in Article 1 of the Convention, provided that the places of departure and destination referred to in that Article are situated either in the territories of two parties to this Protocol or within the territory of a single party to this Protocol with an agreed stopping place within the territory of another State.

CHAPTER III

Final Clauses

Article XIX

As between the parties to this Protocol, the Convention and the Protocol shall be read and interpreted together as one single instrument and shall be known as the Warsaw Convention as amended at The Hague, 1955.

Article XX

Until the date on which this Protocol comes into force in accordance with the provision of Article XXII, paragraph (1), it shall remain open for signature on behalf of any State which up to that date has ratified or adhered to the Convention or which has participated in the Conference at which this Protocol was adopted.

Article XXI

(1) ***This Protocol shall be subject to ratification by the signatory States.***

(2) ***Ratification of this Protocol by any State which is not a party to the Convention shall have the effect of adherence to the Convention as amended by this Protocol.***

(3) ***The instruments of ratification shall be deposited with the Government of the Peoples' Republic of Poland.***

Article XXII

(1) ***As soon as thirty signatory States have deposited their instruments of ratification of this Protocol, it shall come into force between them on the ninetieth day after the deposit of the thirtieth instrument of ratification. It shall come into force for each State ratifying thereafter on the ninetieth day after the deposit of its instrument of ratification.***

(2) ***As soon as this Protocol comes into force it shall be registered with the United Nations by the Government of the Peoples' Republic of Poland.***

Article XXIII

(1) *This Protocol shall, after it has come into force, be open for adherence by any non-signatory State.*

(2) *Adherence to this Protocol by any State which is not a party to the Convention shall have the effect of adherence to the Convention as amended by this Protocol.*

(3) *Adherence shall be effected by the deposit of an instrument of adherence with the Government of the Peoples' Republic of Poland and shall take effect on the ninetieth day after the deposit.*

Article XXIV

(1) *Any party to this Protocol may denounce the Protocol by notification addressed to the Government of the Peoples' Republic of Poland.*

(2) *Denunciation shall take effect six months after the date of receipt by the Government of the Peoples' Republic of Poland of the notification of denunciation.*

(3) *As between the parties to this Protocol, denunciation by any of them of the Convention in accordance with Article 39 thereof shall not be construed in any way as a denunciation of the Convention as amended by this Protocol.*

Article XXV

(1) *This Protocol shall apply to all territories for the foreign relations of which a State Party to this Protocol is responsible, with the exception of territories in respect of which a declaration has been made in accordance with paragraph 2 of this Article.*

(2) *Any State may, at the time of deposit of its instrument of ratification of adherence, declare that its acceptance of this Protocol does not apply to any one or more of the territories for the foreign relations of which such State is responsible.*

(3) *Any State may subsequently, by notification to the Government of the Peoples' Republic of Poland, extend the application of this Protocol to any or all of the territories regarding which it has made a declaration in accordance with paragraph 2 of this Article. The notification shall take effect on the ninetieth day after its receipt by that Government.*

(4) *Any State Party to this Protocol may denounce it, in accordance with the provisions of Article XXIV, paragraph (1), separately for any or all of the territories for the foreign relations of which such State is responsible.*

Article XXVI

No reservation may be made to this Protocol except that a State may at any time declare by a notification addressed to the Government of the Peoples' Republic of Poland that the Convention as amended by this Protocol shall not apply to the carriage of persons, cargo and baggage for its military authorities on aircraft registered in that State, the whole capacity of which has been reserved by or on behalf of such authorities.

Article XXVII

The Government of the Peoples' Republic of Poland shall give immediate notice to the Governments of all signatories to the Convention or this Protocol, all States Parties to the Convention or this Protocol, and all States Members of the International Civil Aviation Organization or of the United Nations and to the International Civil Aviation Organization.

(a) *of any signature of this Protocol and the date thereof;*

(b) *of the deposit of any instrument of ratification or adherence in respect of this Protocol and the date thereof;*

(c) *of the date on which this Protocol comes into force in accordance with Article XXII, paragraph (1);*

(d) *of the receipt of any notification of denunciation and the date thereof;*

(e) *of the receipt of any declaration or notification made under Article XXV, and the date thereof; and*

(f) *of the receipt of any notification made under Article XXVI and the date thereof.*

IN WITNESS WHEREOF the undersigned Plenipotentiaries, having been duly authorized, have signed this Protocol.

DONE at The Hague on the twenty-eighth day of the month of September of the year One thousand nine hundred and fifty-five, in three authentic texts in the English, French and Spanish languages. In the case of any inconsistency, the text in the French language, in which language the Convention was drawn up, shall prevail.

This Protocol shall be deposited with the Government of the Peoples' Republic of Poland with which, in accordance with Article XX, it shall remain open for signature, and that Government shall send certified copies thereof to the Governments of all States signatories to the Convention or this Protocol, all States Parties to the Convention or this Protocol, and all States Members of the International Civil Aviation Organization or of the United Nations, and to the International Civil Aviation Organization.

FORECASTING AIR PASSENGER TRAFFIC BY MULTIPLE REGRESSION ANALYSIS*

By Samuel B. Richmond

Assistant Professor of Economics and Statistics, Graduate School of Business, Columbia University.

THIS paper will describe a technique for forecasting the air passenger traffic that may be expected to travel between two communities in the event that: (1) new airline service is instituted between those two points, or (2) if there is already some type of airline service between the points, the quality of that service is changed. The technique outlined here is useful in situations where at least one of the two points studied has had scheduled airline service with, preferably, many points. By way of illustration, the use of this technique with reference to the City of Denver, Colorado will be described. Here the technique was applied to a large city with a long history of scheduled air service, and it was used to forecast the air passenger traffic that might be expected to travel between Denver and any city with which it might have new or improved air service. This technique was used as the basis for the analysis and presentation of the position of the City of Denver in a recent air route proceeding before the Civil Aeronautics Board.[1]

The Board, as is well-known, issues "certificates" to air carriers authorizing them to operate between specified points. Additions to and changes in these route certificates are made by the Board usually upon application and after consideration of the information placed before it by the parties involved.

Under the present system of federal regulation of domestic air carriers as administered by the Civil Aeronautics Board, proceedings which involve renewal or amendment of air route certificates often become complicated legal affairs involving many parties. Typically, the airlines' counsel represent a high degree of interest and competence, and they come into the proceeding with a considerable amount of carefully prepared supporting data. In such situations, where there are two or more carriers vying for certification to serve a particular city or area over a series of alternative routes, the city or cities involved may find that important issues affecting the convenience and welfare

* The basic work for the preparation of the exhibits described herein was performed, under the supervision of the author, by the staff of the New York transportation consulting firm, James C. Buckley, Inc., with which the author has been associated. The author is indebted to James C. Buckley, Edward MacNeal, and the late Wilfred Carsel of that firm for their invaluable assistance. A similar technique involving simple correlation analysis had been utilized by Dr. Carsel and Mr. MacNeal in an earlier determination of the air service requirements of the City of Dallas, Texas.

[1] The proceeding, known as the *Denver Service Case*, CAB Docket 1841 *et al.*, was finally decided November 14, 1955.

of their citizens are at stake and may be resolved on the basis of the arguments brought forward by the carriers, who, in all fairness, can be expected to base their positions and select their issues on the basis of their own needs as determined by their costs, load factors, route patterns, expansion desires, etc. The needs of the citizens and the business communities of the cities involved will be given, at best, secondary consideration.

Thus, in spite of the genuine desire of the Board to resolve the issues so as to maximize the total benefit to all parties, the needs of the municipalities cannot be given full consideration unless they are studied, analyzed, incorporated into appropriate exhibits and supported by representatives at the various stages of the proceeding. The City of Denver had occasion to participate in just that sort of procedure in the *Denver Service Case.* Various domestic airlines including TWA, American, Braniff, Continental, Western, United, and North American, had over a period of years, applied to the Civil Aeronautics Board for authorization to inaugurate new routes or new route segments through the city of Denver, and, in August, 1953, the Civil Aeronautics Board consolidated these applications into one proceeding which was entitled the "Additional Service to Denver, Colorado Case" ("Denver Service Case"). By this procedure, the Board hoped, by simultaneously hearing all interested parties, to be able to resolve the issues most equitably.

It became obvious to the authorities in the City of Denver that the results of this proceeding could have far-reaching effects upon Denver's air transportation system and indeed upon the future development of Denver and its industries. The great number of airlines involved and the huge number of cities which are served by these various airlines and which, as a result of the proceeding, could become connected with Denver for new single carrier air service meant that the pattern of air services available at Denver could be profoundly influenced by the outcome of the proceeding.

Realizing that the carrier parties involved in the case were naturally concerned with their own interests and route development, and that such interests as the City of Denver might have in the outcome of the proceeding could command, at best, only secondary attention in the applications of these various carriers, the City of Denver therefore decided that its interests could be served adequately only by its direct and active participation in the proceeding. Such participation required, first, a determination of just what did constitute the proper interests of the City of Denver insofar as they could be achieved by the matters consolidated into the proceeding.

The air service available to the City of Denver consists of air flights to and from various other communities. Therefore any improvement in the air service pattern at the city must consist of new service to points with which flights have not been available or additional flights or improved flights to those communities which are being served.

Therefore, there were four steps involved in the delineation and preparation of the issues to be supported by the city in its case before the Board. These steps were:

1. Identification of those cities with which air service was needed.
2. Determination of the type of air service that should be offered.
3. Analysis of the extent to which these services were not being provided by the carriers serving Denver.
4. Selection of those needed services which were not available but which could become available under the applications consolidated in the *Denver Service Case.*

The identification of the cities with which air service was needed was based upon air traffic forecasts under the assumption that services were required and justified if they could generate or develop enough air passenger traffic to make them economically feasible within the present framework of air carrier operations. It is with the techniques used for the preparation of the forecasts that the remainder of this paper is concerned.

These air passenger traffic forecasts were based on a multiple correlation analysis of Denver's air traffic experience. Basically, what was done was:

1. The number of passengers flying between Denver and other cities was analyzed and related to other factors such as community of interest with Denver, distance from Denver and quality of the air service offered.
2. Since data for these other factors could be obtained or hypothecated (as in the case of quality of service) for all cities whether or not they had service with Denver, it was possible, by assuming the same relationship among these factors for the unserved cities as among the served cities, to estimate the air passenger traffic potential between Denver and all other communities.

Definition of Service

Air service was considered to exist between Denver and any other point when single-plane service was offered to that point. That is, if a flight is offered between Denver and another point such that a passenger can board the airplane in Denver and debark from that airplane in the other city (and vice versa), there is single-plane service between Denver and that other point. If it is necessary for the passenger to change airplanes, whether he changes airlines or merely changes to another airplane operated by the same airline, this is multi-plane service and is not considered, in this analysis, as satisfactory "air service." Therefore only single-plane service is considered in analyzing the relationship between air traffic and air service.

Selection of Data for Study

All of the communities with which Denver had single-plane air service offered in a selected period in 1952 were singled out and various data for the year 1952 were studied. These data included: the flight

schedules with Denver, the number of passengers traveling between these communities and Denver, the distance from Denver, and many measures of community of interest between these various cities and Denver. The data for schedules and for air passengers traveling between Denver and these other cities referred to the months of March and September, 1952. This is because it is for the months of March and September that the Civil Aeronautics Board compiles in its "Airline Traffic Survey" the number of origin and destination passengers traveling between all pairs of cities in the United States. In order that the number of passengers traveling between the various pairs of cities may be related to the actual flight schedules under which these passengers were developed, the schedules for March and September 1952 were those selected for study. The year 1952 was chosen because it was the latest year for which the "Airline Traffic Survey" was available at the time of preparation of exhibits for the proceeding.

Community of Interest

Manifestly, one highly useful measure of community of interest between pairs of cities for the purpose of determining air passenger traffic potential is the number of air passengers historically traveling between those points. This measure, although highly useful with respect to those pairs between which service has been offered, is, of course, unable to give any indication of air passenger traffic potential for pairs between which flight schedules have not been offered. Therefore a more general measure of community of interest as affecting air passenger traffic was required.

For the purposes of this analysis many different factors measuring community of interest were compiled and studied. These included: population, distance from Denver, air passengers with Denver, hotel registrants at Denver hotels, air freight to and from Denver, surface letter mail, number of telephone messages from Denver, number of telegrams from Denver, number of home offices of firms with branches in Denver, number of branch offices of firms whose home offices were in Denver, business travel characteristics as compiled from questionnaires sent to Denver business firms, rail passengers with Denver, number of persons renting cars at the Denver airport, number of visiting buyers and exhibitors at annual Denver exhibitions, number of correspondent banks of Denver banks, number of patients admitted to Denver hospitals, number of students at Denver colleges, circulation figures of newspapers and magazines published in Denver, number of bank checks cleared through Denver banks, number of charge account customers at Denver stores, and the familiar and commonly used community of interest measure, population divided by distance.[2]

[2] The usual formula for this quantity is, *population of the first city times population of the second city divided by the distance between those two cities.* In this case, since Denver was always one of the two cities in each pair, the formula was simplified to, *population of the outside city divided by distance from Denver.*

From all of these measures of community of interest, it was desirable to select, if possible, one measure for use in the correlation analysis. The measure selected was the number of hotel registrants from various outside cities registered at Denver hotels. This measure was selected for several reasons:

1. Since the data were obtained by a hotel survey conducted for this purpose, the accuracy and suitability of the data were controlled.
2. Every city in the country, indeed, in the world, was included in the study, since all registrants, regardless of their origin were enumerated.
3. Hotel registrants are typically people who have traveled between their home city and the city in which they are registered. Thus the relationship between number of registrants and transportation requirements is a real one.
4. It was possible, with hotel registrants, to include with each outside city those places which are satellite to it, which use the same airfields, and which, for the purposes of air transportation, are effectively the same community.
5. Preliminary graphical analysis indicated a definite relationship between air passengers and hotel registrants.

For the purposes of this study, the registration records at eleven[3] Denver hotels in March and September of 1952 were examined. The survey covered 141,000 room-days and yielded 53,000 registrants giving home addresses outside the Denver region. Thus, community of interest; or, in this case, the strength of the complex of forces which lead to the generation of air travelers, was measured by hotel registrants as defined above. This measure did, of course, have the disadvantage that it tended to measure community of interest in only one direction. That is, it measured the attraction for persons from other communities to come to Denver, but it did not consider travel in the opposite direction. However, comparisons between hotel registrants and the measures of community of interest which are related to attraction in the opposite direction; such as outgoing mail, telephone calls, and telegrams from Denver, disclosed no serious systematic differences.

Quality of the Service

The desire to travel between two cities, as evidenced by community of interest considerations, cannot of itself produce air passengers unless adequate air service is offered. Thus, the second necessary factor is the availability of flight schedules that are convenient and appropriate to the needs of the potential travelers. There are many factors which reflect the "quality" of air service between two points and which therefore are the factors which influence the extent to which the community of interest between two communities can be expressed in actual realized air traffic. Some of these factors are: the number of

[3] The hotels were: Adams, Albany, Ambassador, Argonaut, Auditorium, Brown Palace, Cory, Cosmopolitan, Kenmark, Sears and Shirley-Savoy.

en route stops, the number of flights per day, the type of equipment used, and the times of day at which service is available. Obviously many of these factors are interrelated and therefore it is not necessary for all of these factors to be considered in order to form a judgment about the quality of the air service offering. Typically an airline may be expected to offer a balanced pattern of service up to and including the best flight which it feels the traffic can support. The quality of this best flight is usually related to the number of en route stops between the points under consideration. Therefore, quality of service may be considered to be a function of the best service offered between the two points, and it may be, with limitations, evaluated in terms of the number of en route stops on that best flight.

In this analysis, quality of service was measured by the number of en route stops.

Distance

A third controlling factor in most travel decisions is the distance between the two points. The effect of distance on air travel is a composite effect of two general influences. The first is the greater tendency on the part of travelers to make trips where the distance is short. The second is the greater tendency for travelers to prefer air travel where the distance is longer, and to make by air trips that might, by any other mode of transportation, be so time-consuming as to be unfeasible.

Since hotel registrant data were used as the primary community of interest measure in the analysis, the distance between each of the communities under consideration and Denver was automatically taken into account by the influence which distance of any city from Denver exerts on the number of hotel registrants from that city registered in Denver hotels. However it was found that for the nearby cities (those within 200 miles) the effect of distance was not adequately taken into account by the use of hotel registrant data alone, but that for those communities there was a further relationship with distance. However, for communities beyond two hundred miles from Denver there was no additional relationship between distance and passengers beyond the effect of distance that was already taken into account in the hotel registrant data.

Since the *Denver Service Case* was concerned primarily with transcontinental air service through Denver, and since under the applications consolidated into that proceeding, there were no communities within two hundred miles of Denver at issue, those communities less than two hundred miles from Denver were eliminated from the analysis, and there was thus no need for separate treatment of distance as a variable in the analysis.

Multiple Correlation Analysis

There were 65 communities which had direct single-plane air service with Denver in March and September 1952, which were more than

200 miles from Denver, and which exchanged a majority of their air passengers with Denver via the carrier offering the single-plane service.

For these 65 communities there were three variables considered in the multiple correlation analysis. These were: air passengers, hotel registrants, and type of service. The data are shown in Table I, and the footnotes indicate in detail how the data for air passengers and hotel registrants were compiled.

Preliminary graphical analysis suggested that logarithmic relationships gave close approaches to linearity. This was quite logical since it indicated that for a given percentage change in hotel registrants, a proportional change might be expected to occur in air passengers, and a proportional depressing effect is produced by any reduction in quality of the service. Thus the traffic generation differential between different service qualities declines with decreasing quality of the service at a greater rate when the quality of the service is good than when it is bad, making the difference between non-stop and one-stop service greater than that between one-stop and two-stop service and that, in turn, greater than the difference between two-stop and three or more stop service. It was also noted that there was no substantial adverse effect of declining quality of single-plane service beyond three-stop service. Therefore all cases of more than three-stop service were grouped with the three-stop cases. The actual variable used in the correlation analysis to represent service was the logarithm of the number of legs (one plus the number of stops); that is, non-stop service was quoted as *one,* one-stop service was quoted as *two,* etc. The other two variables in the equation were the logarithm of air passengers and the logarithm of hotel registrants as those data appear in Table I.

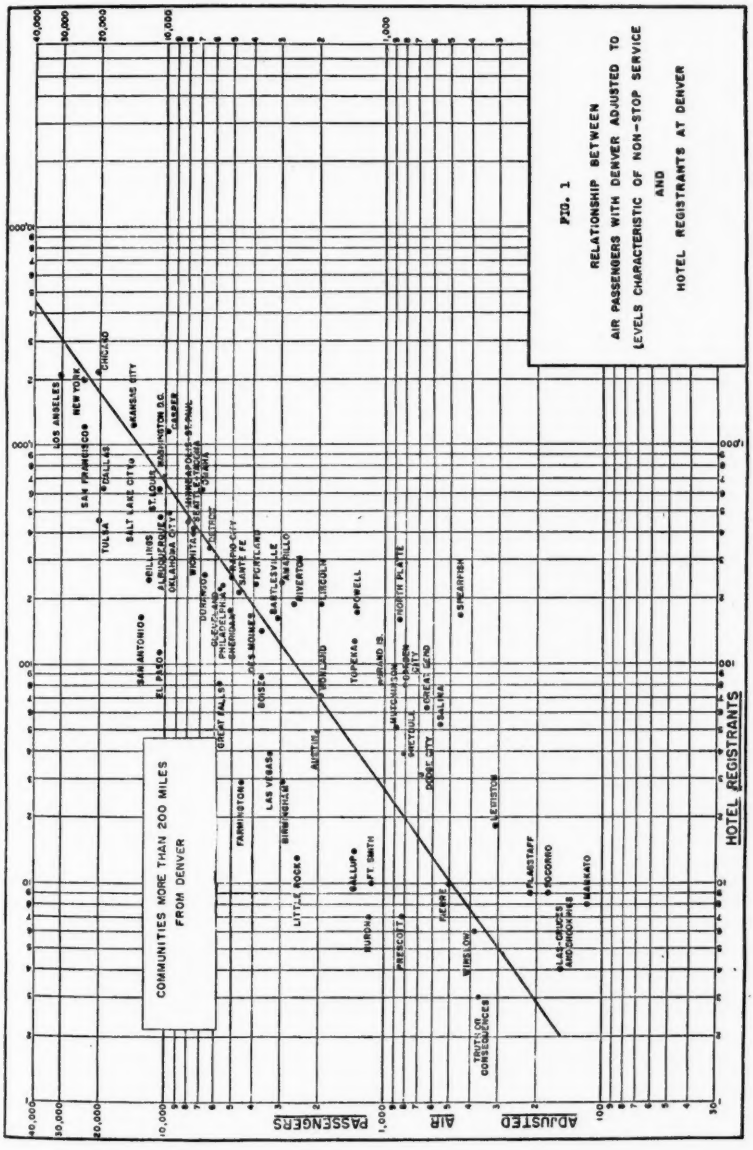
The usual techniques of multiple correlation analysis were applied, and the multiple regression equation was computed. That equation was found to be:

$$\log X_1 = 1.97986 + 0.71529 \log X_2 - 0.84913 \log X_3$$

where X_1 = origin and destination passengers, 1952
X_2 = the number of hotel registrants
X_3 = the number of intermediate stops (best service offered) plus 1

As was to be expected the plus and minus signs, respectively, indicate that air passengers increase with increasing hotel registrants and decrease with worsening service. It must be remembered that the greater the value of the service measure; namely, the number of stops, the worse the service. The multiple correlation coefficient was found to be 0.91. The significance of this coefficient was tested by the methods of analysis of variance, and it was found to be significant.

Fig. 1 shows the multiple correlation relationship reduced to two dimensions. This was done by taking service variations into



account before plotting the points. That is, the generation effect of service was taken into account by increasing the passenger figure for all communities with less than non-stop service to the level characteristic of fully developed non-stop service. This adjustment was made on the basis of the relationship between air passengers and type of service as described by the multiple regression equation. Thus it

TABLE I

AIR PASSENGERS WITH DENVER, HOTEL REGISTRANTS AT DENVER HOTELS, AND TYPE OF AIR SERVICE WITH DENVER FOR THE SIXTY-FIVE COMMUNITIES

Community (1)	*Air Passengers* (2)	*Hotel Registrants* (3)	*Quality of Service (No. of Stops)* (4)
Birmingham, Ala.	894	29	7
Flagstaff, Ariz.	66	9	5
Prescott, Ariz.	258	7	6
Winslow, Ariz.	120	6	4
Fort Smith, Ark.	348	10	4
Little Rock, Ark.	762	13	5
Los Angeles, Calif.	30,438	2,086	0
San Francisco, Calif.	23,592	1,197	0
Durango, Colo.	2,622	253	2
Washington, D. C.	10,164	705	0
Boise, Ida.	2,016	87	1
Chicago, Ill.	20,364	2,149	0
Des Moines, Iowa	2,034	141	1
Dodge City, Kan.	210	31	4
Garden City, Kan.	246	80	3
Great Bend, Kan.	198	63	5
Hutchinson, Kan.	882	51	0
Salina, Kan.	552	53	0
Topeka, Kan.	768	127	1
Wichita, Kan.	4,212	389	1
Detroit, Mich.	3,534	342	1
Mankato, Minn.	36	8	9
Minn.-St. Paul, Minn.	7,866	445	0
Kansas City, Mo.	14,040	1,210	0
St. Louis, Mo.	5,904	626	1
Billings, Mont.	6,594	240	1
Great Falls, Mont.	2,226	81	2
Lewiston, Mont.	96	18	4
Grand Is., Neb.	414	82	2
Lincoln, Neb.	594	186	3
North Platte, Neb.	468	160	1
Omaha, Neb.	6,828	622	0
Las Vegas, Nev.	3,318	39	0
Albuquerque, N. M.	10,392	468	0
Farmington, N. M.	1,374	29	3
Gallup, N. M.	420	14	4
Las Cruces, N. M.	48	4	8
Santa Fe, N. M.	1,830	211	2
Socorro, N. M.	54	9	3
Truth or Consequences, N. M.	114	3	7

TABLE I — (Continued)

AIR PASSENGERS WITH DENVER, HOTEL REGISTRANTS AT DENVER HOTELS, AND TYPE OF AIR SERVICE WITH DENVER FOR THE SIXTY-FIVE COMMUNITIES

Community (1)	*Air Passengers* (2)	*Hotel Registrants* (3)	*Quality of Service (No. of Stops)* (4)
New York, New York	23,916	1,996	0
Cleveland, Ohio	3,114	221	1
Bartlesville, Okla.	1,212	161	2
Oklahoma City, Okla.	5,388	489	1
Tulsa, Okla.	6,168	448	3
Portland, Ore.	3,900	233	0
Philadelphia, Pa.	3,054	229	1
Brookings, S. D.	48	4	8
Huron, S. D.	360	7	7
Pierre, S. D.	156	10	6
Rapid City, S. D.	1,530	249	5
Spearfish, S. D.	138	168	4
Amarillo, Tex.	2,952	234	0
Austin, Tex.	618	49	3
Dallas, Tex.	7,554	632	2
El Paso, Tex.	5,856	112	1
San Antonio, Tex.	3,960	164	4
Salt Lake City, Utah	14,334	839	0
Seattle-Tacoma, Wash.	7,566	410	0
Casper, Wyo.	9,804	1,156	0
Greybull, Wyo.	252	39	5
Powell, Wyo.	414	171	6
Riverton, Wyo.	798	188	4
Sheridan, Wyo.	1,980	175	2
Worland, Wyo.	600	71	4

Sources:

Col. (2): CAB Airline Traffic Surveys, March, 1952 and September 16-30, 1952, expanded to an annual total by multiplying the sum of March passengers and twice September 16-30 passengers by six.

Col. (3): Registrants at 11 Denver hotels in March and September, 1952. The survey covered 141,000 room days and yielded 53,000 registrants giving home addresses outside the Denver region. The hotels were: Adams, Albany, Ambassador, Argonaut, Auditorium, Brown Palace, Cory, Cosmopolitan, Kenmark, Sears and Shirley-Savoy.

Col. (4): Number of intermediate stops, best flight in either direction in March or September, 1952. Official Airline Guide, March and September, 1952.

shows the relationship between the service-adjusted air passengers, on the one hand; and hotel registrants, on the other hand.

The resulting equation was used to estimate the potential air passenger traffic between Denver and other communities. In order to obtain the estimate, the number of hotel registrants found in the sur-

veyed hotels during the survey period is entered into the equation and then estimates of potential air traffic can be made for any and all qualities of service. These estimates were evaluated in terms of the other available community of interest measures and such adjustments as seemed indicated were made. The most important and frequently occurring kind of adjustment was an increase in the estimated traffic potential in those cases where there was no direct single-plane service between the city in question and Denver but where the actual developed traffic under the two-plane connecting service was particularly high. This may be an indication that, in at least some of those cases, the use of hotel registrants as a measure of community of interest for the purpose of determining potential air passenger traffic erred by failing to consider attraction in the opposite direction; that is, potential travel by Denver residents to the communities in question.

From these air traffic estimates the appropriate quality of service between Denver and the other communities was determined, and this was then compared with the quality of service then being offered. For those communities where the quality of service required, as thus determined, was better than the quality of service then being offered, and where an improvement in the quality of service offered could be obtained through a determination of the issues involved in *The Denver Service Case,* the City of Denver presented exhibits and witnesses before the CAB in support of its interests as thus defined.

RECENT ADDRESSES

"SOME PERSONAL REFLECTIONS AFTER EIGHT MONTHS AS CHAIRMAN OF THE CIVIL AERONAUTICS BOARD"*

By Ross Rizley

Chairman, Civil Aeronautics Board

When I became Chairman of the Civil Aeronautics Board in March, 1955, I made the firm resolve to study the Board and its operations and to try to size up a bit its problems before making any speeches about my new-found activity. Indeed, I could hardly do otherwise. Until five days before my appointment to the Board was sent up for Senate confirmation, I had never thought of myself as being concerned with the regulation of air transportation. It was a straight White House assignment, and the only briefing I ever got — the only instructions I ever got — were to apply the Adminstration's basic policy — a little common sense and sound judgment. This I have done to the very best of my ability.

While 8 months is not a very long period of incubation, I feel that I now am ready to give you some of my personal reactions to air transportation and its governing body, the Civil Aeronautics Board. I certainly make no pretense of being an expert on all the varied aspects of the civil aviation picture. However, I have been with the Board sufficiently long so that I think I am pretty well aware of its major problems. On the other hand, I am still sufficiently new so that I can retain an outsider's viewpoint and basic reactions to what is taking place in the aviation picture. Four months ago I could not have made this speech, since I would not have had sufficient insight into the Board's operations to make it; and if I had had several years' experience on the Board I might have become so accustomed to the familiar way of doing things and the established pattern that the freshness of approach would be obscured. What I am going to talk to you about are my personal reactions as an 8-months Chairman of the Civil Aeronautics Board.

When I came with the Board my first problem, like that of any new member, was to familiarize myself with the statutory functions and responsibilities of the agency — then to discover the major problems which confronted it — what has been done in the past to solve them — and how the Board is currently going about solving them. Finally, and as a result of wrestling with the day-today problems, I began to think of ways and means of possible improvements which could be made in current Board procedures. Since this is a personal appraisal, I would like to discuss these same points with you in about the order which I encountered them.

In the beginning I am frank to say I knew very little about the Board in particular or civil aviation in general. Like the majority of Americans these days I had used the airlines and admired the splendid technical progress which we had made in the field of civil aviation. As for the Board itself, I knew that it was a quasi-judicial and quasi-legislative agency, created as an arm of Congress and endowed with certain executive responsibilities. But what exactly these responsibilities were, how the Board discharged them, and how it was related to the Civil Aeronautics Administration, I had little, if any, knowledge.

* Delivered at the Enid Chamber of Commerce, Enid, Oklahoma, November 18, 1955.

I learned that the Board was one of the smallest independent regulatory agencies in Washington, with its staff and five Board members totaling only around 600 persons. It was created by the Civil Aeronautics Act of 1938 to perform regulatory duties in the aviation field in many respects similar to those performed by the Interstate Commerce Commission with respect to railroads and motor carriers. Thus, as an arm of the Congress, the Board is charged with the responsibility for awarding routes to common carriers by air through the medium of certificates of public convenience and necessity. Air carrier tariffs are under our control, and the rates, fares and charges with respect to domestic transportation are subject to our jurisdiction.

The Board determines mail pay and fixes subsidy rates. It prescribes accounting practices of air carriers, and passes upon intercarrier relationships, such as mergers, consolidations, and acquisitions of control. Interlocking directorates and other similar relationships are subject to Board scrutiny, and contracts between air carriers relating to matters affecting air transportation are within its jurisdicion.

In addition to its economic functions, the Board has a strong safety role. It is charged by Congress with the quasi-legislative duty of promulgating Civil Air Regulations applicable to airlines, corporate users, industrial operators and private flyers alike. We are also charged with the duty of conducting investigations into the causes of aircraft accidents, in order to determine the facts, conditions, and circumstances of the accident and its probable cause. The importance of this function cannot be overstressed, since by finding out exactly what has caused an accident the Board and others concerned may take measures to avoid future accidents of the same or similar nature.

The Board has some quasi-judicial duties which are almost similar to those of a court. For example, the function of suspending or revoking safety certificates after hearing is a matter that comes within the Board's jurisdiction. In this we share responsibility with the Administrator, the Board or one of its examiners sitting as the court, and the Administrator, through his enforcement attorneys, prosecuting the case against the offending airman.

Unlike the other quasi-legislative agencies of the Government, the Board has certain well-defined executive duties, which are wholly new to the American system of government. Among these is the function of advising the Secretary of State as to the bilateral air transport agreements which are entered into between the United States and foreign countries, and the function of recommending to the President those foreign air carriers which should be granted permits to operate into the United States.

One of the questions most frequently asked me is: What is the difference between the CAB and the CAA? It certainly is true that the relationship between the two agencies is a great deal better understood by them than it is by the general public. Part of the confusion undoubtedly arises from the fact that the Civil Aeronautics Act originally provided that the Administrator and his staff would be part of the Civil Aeronautics Board, which was then called the Civil Aeronautics Authority. While this organizational set up was changed in 1940 by Reorganization Plan IV, and the Administrator transferred to the Department of Commerce, the initials of the Civil Aeronautics Administration—CAA—are the same as those formerly applicable to the Board, when it was the "Authority."

The Civil Aeronautics Administration, unlike the Board, is wholly and completely an executive agency. Its functions are many and varied, but the principal ones are the building, maintenance and operation of the Federal airways, the control of air traffic, the administration of the Federal Airport

Act, and the enforcement of the Civil Air Regulations which have been promulgated by the Board. Agents of the Administrator check all applicants for airman certificates, study the aircraft designs of new aircraft to see whether they comply with the Board's standards, and issue type certificates to the manufacturer, and other types of air agency certificates.

If I were to make an analogy to more familiar fields, I would say that the Board is aviation's Legislature and Supreme Court, while the Administrator is the Department of Highways, Department of Education, Police Department and State's Attorneys Office, all combined in one.

As I became better acquainted with the day-to-day workings of the Board, I began to realize that the major problems of the Board fall into three broad classes—service, subsidy, and safety. Of these, the most complex is service, the least complex is safety, and because I prefer to start with the simple things, I will deal with these topics in inverse order.

The main reason that safety is a relatively simple problem for the Board is that air transportation today is safe. Notwithstanding recent terrible disasters, it is far safer for the passengers than our most customary form of transport—the automobile. Last year the number of fatalities per hundred million passenger miles was about the same for railroads, buses and air carriers. As an industry—and this is really quite startling—the scheduled carrier system is far safer than any other transportation industry per unit of transportation furnished. In other words, fewer Americans are killed by transport aircraft per passenger mile than by any other form of transport.

In spite of the excellence of our safety record, neither we on the Board nor anyone in industry is satisfied. Our common objective is absolute safety, and the problem which confronts the Board therefore is one of degree. How many restrictions of a safety nature should we place on air transportation? It's an old saw in aviation circles that the only safe airplane is one that's locked up in the barn. None of us want that. Consequently, the objective of the Board is to achieve the maximum degree of safety that is reasonably attainable. This requires constant study on the part of a sizeable number of our staff, consultations with all branches of the industry, consideration of accident and incident reports, reexamination of old rules in the light of new developments and procedures—all to the end that our regulations be continuously kept up to date with what is possible of achievement.

Turning now to the matter of subsidy, that is the type of problem it is really a pleasure to deal with. The reason for this is that all of us at the Board feel we are making great strides forward in reducing the need for subsidy. Just over a month ago we were able to revise our estimate of total airline subsidy requirements for the fiscal year and effect a decrease of over 20% from the estimate made just last February, and nearly one-third less than the amount required in fiscal year 1954.

The progressive reduction is most heartening from many standpoints. It is an indication of the increasingly widespread acceptance of air transportation, since costs once made up by subsidy are now being made up by fare-paying passengers who find aviation meets their transportation needs. It is also encouraging to note that our national flag lines who fly overseas are beginning to make money without need for subsidy support.

Of the principal carrier groups only the local service carriers as a class will continue to require financial aid from the government in the form of subsidy for some time. But in my opinion the prospects for the local service carriers are exceedingly bright. Indicative of this is the fact that during the first six months of this year the total passengers carried on local service airlines increased by nearly 300,000 passengers, or over 27% compared with the first six months of 1954. Load factors, which for the 12-month period

ended September 30, 1954, were 40.4%, jumped to 45.2% for the similar period ended September 30, 1955.

From time to time I have been made aware that there is some feeling within the local lines that the Board may have been a little too tough in its administration of the mail rate and subsidy programs as it concerns them. I, for one, have the feeling that to get the most benefit out of subsidy in achieving the ultimate goal of self-sufficiency, the program must be administered with a certain degree of toughness. I think we all can agree that subsidy is an instrument to teethe on, not a soft pillow. However, there is no doubt that an inadequate award of subsidy can retard a carrier's growth, and for this reason, if the industry has any suggestions for revision of the Board's subsidy policies, the Board will give them thorough and careful consideration. No promises, you understand, other than that we will discharge the duty imposed on us by the Civil Aeronautics Act in the best way we know how.

Now let us look at the matter of air service. As I said before, it is an extremely complex problem having many aspects. The first of these that comes to mind is the usual type of new route case. But it has other sides too. The problem of the irregular carriers is one of its aspects. The negotiation of bilateral agreements for the exchange of foreign routes is another, and policies with respect to route patterns of the local service carriers is a third.

Interwoven throughout these aspects of the problem, and the thing that produces many an ill for the Board and industry alike is the cumbersome, time-consuming procedures, the delays which seem to make each matter drag on interminably, the reams upon reams of minor and frequently irrelevant facts which enterprising counsel have succeeded in introducing in evidence. All these make the decisional process in these extremely complicated cases a great deal harder. You know, one of the things I learned when I was studying law was that the old common law forms of pleading—declaration — plea — replication — rejoinder — all were for the purpose of narrowing down the issues to a single issue or at least to as few as possible. Present-day administrative practice seems to me to have the opposite objective—that of making every case as complicated as possible!

Notwithstanding these difficulties, the Board has disposed of a great number of matters, and I am proud to say that this year promises to be its most productive. On January 1, 1955, the Board was faced with 558 dockets in various stages of proceeding, and 557 dockets still to be heard, some of them dating back as far as 1945. By November 1st, another 510 dockets had been added to the total, representing applications and petitions filed with us since the first of the year. By November 1, decisions involving a total of 324 dockets had been made and announced. Cases involving 163 dockets had been set for action, and 133 petitions had been dismissed from the dockets as no longer pertinent.

One of the major matters announced recently by the Board was its decision in the Large Irregular case. This decision, which we released November 15th, 1955, is designed to establish a framework within which the former irregular carriers can operate. Although procedurally it is an interim order—since the issue of fitness, willingness, and ability has still to be determined for each carrier—we hope that it will constitute a solid foundation for future regulation. What we have sought to do essentially is to make a more workable regulation, without changing the essential character of the service or its relationship to the over-all air transportation picture. In some respects the authorization is more liberal, but in others it is more restrictive. You will note that what we have tried to do is to keep the growth of this segment of the industry within predictable chan-

nels—performing its allocated role in the air transportation business. This role will be mainly charter work, with the additional right to conduct not in excess of ten individual service flights per month in the same direction between any pair of points. We have taken care, we believe, of any substantial threat to the certificated system through detailed controls against direct or indirect pooling of services and mergers of operators.

By the end of the year we hope that we shall have completed all the permanent certification cases of the local service airlines.

Thus, in my opinion the Board can be justly proud of what it is accomplishing. I like to feel that I can claim credit for some of this accomplishment, but much credit must also be given to my colleagues of the Board. As could be expected, differences of opinion between the Board members as to how a given problem should be solved frequently arise. However, I say with conviction that each Board member is doing his level best in accordance with his own views to discharge his responsibilities under the Civil Aeronautics Act.

Now I want to talk a little bit of what I as an 8-month Chairman feel is wrong with the present situation and make some suggestions which I think might be helpful.

As I see it, the central and overriding principle established by the Civil Aeronautics Act is public convenience and necessity. These words have no hidden and mystic significance. They only mean that the Board is vested with the power and duty to see to it that the public of this country gets the best, most efficient, reasonably priced and safe air service that is possible for man to devise in the present state of the art. The Act created a public service industry, and in so doing gave the Board a number of controls to attain this objective. Public convenience and necessity was to be the criterion for the award of a route. Air carriers were subjected to severe safety controls and measures. Competition was to be encouraged to the extent necessary to promote a sound air transportation system. And subsidy, through the mail pay provisions, was provided to take care of the developmental period. Finally, detailed provisions, permitting the Board to govern intercorporate relationships, were included to police the competition and see to it that competitive practices were constructive and not destructive, real and not fictitious.

I could not be more wholeheartedly in accord with the basic objectives of the Act. However, it has seemed to me as I have listened to cases presented during my tenure as Chairman that this basic objective is being gradually obscured by matters which are of a subsidiary interest to the traveling public. The true issue of public convenience and necessity—that is, whether the public needs more service or more competitive service between any two points—is submerged in the question of who shall render a service which everyone agrees is necessary. Proceedings drag on before examiners for weeks on end on the issue of choice of carriers.

The courts, through the *Ashbacker* doctrine, have added further difficulties and confusion. By emphasizing the private rights of carriers in connection with applications for new routes or new services, with a consequent de-emphasis on the public need for the new service, they have not left the Board free to decide whether communities need additional service unless it also before final award gives comparative consideration to all applicants who desire to perform the service.

Since in most cases no two applicants desire to perform an exactly similar service, it is necessary to extend the proceedings so as to encompass all applicants whose petitions might require comparative consideration under that doctrine. As this extension grows, like a ripple in a pond, it tends to enlarge to a wider and wider extent the scope of the proceeding. Finally,

the record and the issues reach such gigantic proportions that it becomes impossible to arrive at a fully reasoned and integrated decision.

The effect of this doctrine over the long run is to give an advantage to the large carriers, since they are far better able to support the costs of a drawn-out and complicated proceeding. Legal fees and payments to high-priced economists mount very rapidly.

Another aspect of the Board's difficulties and problems in connection with making findings of public convenience and necessity—and which again indicates the extent to which the private motivations of the carriers have begun to take predominance over the broad questions of public interest—is the matter of *pressures*. Pressures, in my way of thinking—and *by pressures I mean extrajudicial efforts to promote or defeat a certain decision*—are detrimental to everybody concerned. First of all they are detrimental to applicants generally, because even if an applicant is not desirous of using pressure, he may feel compelled to do so to counteract the pressures created by his opponent.

Pressures are bad for the Board, not because the Board will yield to pressure—certainly so long as I am with the Board I will use every effort I can to resist such pressures—but principally because of the harrassing influence on the Board members in arriving at their decision, caused by the introduction of extraneous issues and political considerations which distort the evidence of record. Again the Board may over-react to pressures and, in the attempt to resist them, lean over backward to achieve a result which they otherwise might not have reached.

Lastly, I believe it is detrimental to the individuals through whom the pressure is exerted. In this regard I am thinking particularly of Congressional pressures, to which the Board has in recent times been particularly subject. As a former member of Congress I know that the objective each Congressman is seeking in all government agencies is that they be manned by competent administrators who will impartially decide each case on its merits against the background of law. This assurance is a guarantee that my own constituents will be properly taken care of, and their interests will not be subordinated to those which some other person or pressure group might desire to see promoted. I think it wholly within the bounds of propriety for any Congressman to inquire of an agency as to the progress his constituent's case is making, and to assure himself that the case has not become mired down in red tape. However, when Congressional interest passes this point, in my opinion it becomes something that jeopardizes the integrity of the whole independent agency system.

Summarizing this aspect of what I have to say, I feel that *there has been an undue shift of emphasis from public convenience and necessity to the seeking and protection of private carrier rights.* No one is a stronger believer than I in the free enterprise system, but air transportation under the Civil Aeronautics Act is not free enterprise—it is regulated competition, and the only excuse for limiting competition at all is the public good. Private rights must be respected, but when protection of private interest reaches such a point that, for any case of reasonable size to reach decision, it takes months and months of hearing, and reams of irrelevant, repetitive, and frequently incompetent evidence; when it takes time, energy, and money spent on pressures to override the evidence introduced; when proceedings grow like cancer because of the need for protecting peripheral private rights under the doctrine of the *Ashbacker* case—when all these elements combine, we lose sight of the basic reason for our existence, which is to assure to the public of the United States—to the small communities, the medium size communities and the large cities, an adequate, safe and successful air transportation system.

I therefore believe that the Congress should give this situation a pretty thorough review to see whether the Civil Aeronautics Act cannot be revised to cure some of these difficulties. Certainly the doctrine of the *Ashbacker* case can be given a more restricted application. And there may well be certain issues in new route cases—like fitness, willingness, and ability—which can be handled in *ex parte* proceedings without destroying the basic foundation of a hearing on public convenience and necessity. Rules of evidence can also be tightened.

Another suggestion I would like to make is one for increasing the practical knowledge of the Board and its staff of air transport matters. I am very strongly of the opinion that greater knowledge of the inudstry would benefit the industry. This "educational" suggestion has three aspects.

First, I think the Board members and the staff should get out more and visit industry installations. Such a program cannot, however, be made effective in the light of the Board's budget without the cooperation of industry. I am pleased to say that I have taken the lead in approving a principle which would permit those carriers, who so desired, to provide transportation without cost to the government to Board personnel enabling them to study the industry at close range.

Secondly, I think there ought to be provided greater opportunities for industry discussion with the Board of matters affecting individual carriers in negotiations for bilateral air transport agreements. Personally, I would like to see an industry advisor named on every delegation taking part in bilateral discussions. However, that is basically a matter for the Department of State to decide, since the composition of U. S. delegations to take part in foreign negotiations is that Department's ultimate responsibility.

However, I believe that we in the Board should spare no pains to obtain the views of the particular carriers who will be affected before giving our advice to the State Department in connection with these international negotiations.

The *third* educational suggestion I want to make is the formation of an *Advisory Assembly on Civil Aviation.* What I have in mind is the creation of a group of outstanding citizens representing different classes of airlines, pilots, other labor groups, manufacturers, freight forwarders, shippers associations, corporate owners, private pilots and all other elements of our great and progressive industry. I think there should also be included representatives of the National Council of Mayors, the U. S. Chamber of Commerce, the Aviation Writers Association, and other representatives of the trade press. This Assembly would meet with the Board once or possibly twice a year, and would make recommendations to the Board for its guidance in the administration of the Act. Naturally any consideration of cases pending before the Board would be barred from discussion, but Board procedures, general policies, regulations, and the like would all be fair game. I think it would work!

Let me repeat these recommendations again:

1. I believe the Act should be revised to restrict, although not entirely eliminate, the *Ashbacker* doctrine in connection with Board certificate proceedings.

2. I believe the Civil Aeronautics Act should be amended so as to permit the Board to find fitness, willingness, and ability in *ex parte* proceedings.

3. I also believe that the Congress should reexamine other provisions of section 401 of the Act so as to focus these proceedings on the *public* convenience and necessity in fact as well as theory.

4. I believe that Board members and Board staff should become more familiar with the actual operations of the industry—and if this end can

be accomplished better by Board acceptance of free transportation for its staff voluntarily offered by the airlines—I am for it.

5. I believe there should be closer collaboration by the Government with the industry in bilateral negotiations.

6. I believe that an Annual Assembly composed of representatives from all segments of industry and those served by it should be created by the Board to meet periodically with and advise the Board in respect of current aviation problems.

In conclusion I would like to add one more reflection of an 8-month Chairman. I think air transportation is a wonderful industry. On the whole it is an industry dedicated to public service. It is an industry which appeals to the imagination of all Americans. With the continued growth of low cost service and with the great expansion of the local airlines, it is an industry not limited to any class or section. It is here to serve us all everywhere in our broad land and its future has all the shining lustre of American inventiveness and pioneer spirit.

"FURTHER REFLECTIONS—AIRCRAFT ACCIDENT INVESTIGATION BY THE CIVIL AERONAUTICS BOARD"*

By Ross Rizley

Chairman, Civil Aeronautics Board

I have recently returned from my home State of Oklahoma, where on November 18th I delivered my first major speech as Chairman of the Civil Aeronautics Board, a position I have held for a little more than eight months. I was careful to explain to my friends in Oklahoma, and to my acquaintances in the aviation industry, that this length of time was certainly not a very long period of incubation. I explained to them that I make no pretense of being an expert on the varied aspects of civil aviation.

Now I find myself—only four days later—addressing the membership of the Aero Club of Washington, which, I am told, is an aviation audience both erudite and cynical. However, I believe that because you know more about the problems of civil aviation than most audiences, you will perhaps better understand some of the problems that have faced me during my tenure as Chairman.

As a Washington audience generally familiar with the Federal Government's interest and activity in the development of civil aviation, I wonder if you fully realize the enormity of the problems that are faced by the CAB almost daily. Your very closeness to Federal Government operations here in Washington might alter the focus of your understanding of just *what* the Board does—*how* it does it—and *why* it does it.

But first I should like to point out that the Board, which is one of the smallest independent regulatory agencies of the Federal Government—employing five Board Members and a staff of approximately 570 people—is dealing with a dynamic, expanding industry that is changing the transportation life of this nation—and of the world. Indeed, the domestic airline network of 13 trunk air carriers and 13 local service air carriers in 1955 employed a total of 89,721 people, and these 26 air carriers together have a corporate wealth today of more than one billion dollars! To regulate the air transport industry part of American civil aviation alone is a monumental task.

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* Delivered before the Aero Club of Washington, Washington, D. C., November 22, 1955.

I am confident that I need not explain to you folks here today *what* the Board does as the top-level judicial agency over all American civil aviation. I recognize many faces in this audience who have appeared before the Board in public hearing seeking to obtain new or additional air carrier routes for their clients. The authority to operate an airline to specific cities and over a specific route is one of the powers vested in the Civil Aeronautics Board by the Civil Aeronautics Act passed by the Congress in 1938. As you know, we are also responsible for the fixing of tariffs and for the setting of rates of pay for the transportation of mail—and of course for setting the rate of subsidy and for paying that subsidy when it is required by certain certificated carriers who have not yet attained the ability to fly without such Federal assistance.

I am sure most of you are familiar also with the fact that it is the Board which promulgates the Civil Air Regulations under which all civil aviation in America operates. And finally, I am confident that all of you know that it is the Board that is responsible for the investigation of civil aircraft accidents in order that we may determine the cause of such accidents—and then apply corrective measures to prevent additional accidents from the same cause.

This responsibility of the Board in connection with civil aircraft accident investigation is a function that is not widely known or understood. I should like to tell you briefly something about air safety in general and the function of accident investigation in particular, because it is relatively unknown by the public as a whole—even the aviation public. It is a function of our operations that has contributed a great deal to the world safety record in air transportation that is held today by our American air carriers.

The Civil Aeronautics Act charges the Board with the responsibility for investigating civil aircraft accidents to determine the cause. It was the intention of the Congress—and it is definitely the intention of this Board—to remove any mystery as to the reasons for civil aircraft accidents. We are dealing today with the fastest growing transportation utility the world has ever known. Just as much as any other vehicle of transportation, it is subject to accidents. Nevertheless, the record of American commercial air transportation, based on the ratio of insurance coverage required and passenger mileage operated, shows that air travel is far safer than the private automobile.

I have pointed out that the scheduled air carrier industry is far safer than any other transportation industry per unit of transportation furnished, because the record shows that fewer Americans are killed by air carrier aircraft per passenger mile than by any other form of transportation. In spite of these facts, which the Board and the airline industry usually rush into print following any major aircraft disaster, the full story of air safety is not always revealed. Within minutes of notification of an airline accident safety investigators of the CAB are enroute to the scene. Immediately after their arrival, the wreckage is impounded in the name of the Board for the Federal Government; and State police, local police, and if necessary, detectives hired by the Board, are placed on 24-hour guard duty to prevent the public from disturbing the wreckage.

The Board's accident investigators move in on the scene in much the same way that police detectives move into a room in which a murder had been committed. Every piece of evidence involved in the wreckage is a potential clue as to the cause of the accident. Through the years we have developed a system of accident investigation which is perhaps one of the best examples of group endeavor I know of.

The Board names an investigator-in-charge of each accident. He, in turn, appoints two or three or four working groups, under his direction,

with each group headed by a CAB investigator. For instance, if an engine or propeller failure is under suspicion, the No. 1 accident investigation team will be the Power Plant Group headed by a CAB investigator, and will usually comprise a representative of the engine manufacturer, the propeller manufacturer, a member of the Air Line Pilots Union, representatives from the airlines maintenance shop, and perhaps a power-plant specialist from the Board's Washington office. A second investigation team might be the Witness Interrogation Group, again headed by a CAB man and composed of a representative from the airline involved in the accident, a member of the Pilots Union, and perhaps a member of the State or local police. The work of this group is devoted to interrogation of all eye witnesses of the accident, the pinpointing of the physical position of each witness on an area map, and then the gradual weeding out of these witnesses until a sound nucleus is developed.

The same type of group operations holds for a Structures Group, again headed by a CAB investigator specializing in aircraft structures, who will be assisted by a representative of the aircraft manufacturer, the company flying the airplane, a Pilot Union representative, and probably an additional structures expert from the Board.

These men who compose each of these working groups in accident investigation all have a common goal: to determine the specific cause of the accident. It is obvious that it is to the benefit of all aviation that the Board find the cause and consequently these men pool their combined knowledge and background to bear on the problem.

Following the investigation on the accident scene with the compilation of facts obtained by the engine and propeller group, the witness interrogation group and the structures group, the Board then sets up a public hearing to enter all these facts in a public record for technical evaluation by the Board and the subsequent public announcement of the cause of the accident. I should like to point out here that when any fact is disclosed in an investigation that might have a bearing on current flight operations, it is followed up immediately so that even before a public hearing is completed, the Board many times has been able to take corrective action to prevent accidents.

I must say here that from time to time the Board has been criticized for the length of time consumed before it issues the final accident findings and reports to the public. Now, I am a great exponent of speeding up the efficient processes of our Federal Government in all its varied operations. However, in the field of civil aircraft accident investigation, many times before a public hearing can be held, the Board must, if it is to develop technical evidence accurately, resort to metallurgical, chemical and X-ray analyses of aircraft parts involved in an air carrier disaster.

Many of these reports, including also the results of physiological analysis, are time-consuming and must be adequately verified before they can become a positive finding of fact. I cite these items so you will have some further understanding of the detail necessary to bring forth the probable cause of any accident, and I do so with the hope that you will understand why many of our investigations cover a period of several months rather than several days or weeks.

While I am on this subject, I should like to mention briefly the most recent tragedy involving one of our scheduled air carriers. The destruction of a DC-6B aircraft of United Air Lines over Longmont, Colorado, by a time-bomb placed in a passenger's luggage is the first time in American transportation history that sabotage has been the cause of a fatal accident.

I am told that in the early days of American air transportation, public discussion by industry people of any airline accident was not only con-

sidered economically dangerous but was unofficially forbidden. We have come a long way since those early days. Indeed, the investigation of aircraft accidents through the medium of a public hearing held by the Board, and the subsequent issuance of a public report containing the Board's findings as to the cause of an accident, represent an example of uncensored, democratic government at its best. That is why I have not been able to worry or mentally wring my hands over all of the publicity devoted to the air tragedy at Longmont and the subsequent arrest of the perpetrator of this crime.

I say this not as a result of my eight months' incubation as Board Chairman but because over the years that I have used air transportation as a layman, I came to accept the economic and technical facts of air transportation without question—and in the same way and with the same faith that I accept the facts of highway, rail and ocean transportation.

I have heard the whispered fear that the Longmont sabotage disaster might serve to inspire a similar attempt in the future. Such whispers as these are the things that destroy man's faith in man. The faith and confidence I had in air transportation prior to coming with the Board—and the even greater confidence I have now as Chairman of the Board—has not been shaken by the isolated Longmont tragedy. I shall fly more in the future than I have in the past.

I am proud to report to you today that this faith and this confidence—this belief in my fellowman—has been borne out since the Longmont case by the continuing safe operation of our great air transport industry whose passenger load factors are steadily increasing.

The Federal Bureau of Investigation, one of the law enforcement agencies of your government, working closely with the safety investigation forces of the Civil Aeronautics Board, were responsible for the quick solution of the Longmont case. And over the years since the Board's beginning in 1938, we have achieved an enviable record in determining the cause of civil air accidents—and quickly applying corrective measures whenever possible. Indeed, since 1938, the Board's accident investigation record discloses that it has successfullly solved nearly 97 percent of all air carrier accidents—and this is a record that has contributed much to the built-in safety of our great American air transportation system.

Perhaps I have devoted somewhat more time to air safety than I originally intended, but it is a subject currently in the public mind—and for that reason I thought that even before such an aviation-educated audience as this it would be appropriate.[1]

In conclusion, Mr. President, I should like to emphasize that the airline industry of the United States, in a short period of 30 years, has developed into a powerful instrument of American international policy and an equally powerful national transportation utility. It has cut the barriers of time and distance, and made possible increases in trade and travel never before enjoyed by man. It is an industry that appeals to the pioneer imagination of all Americans.

With the continued growth of low-cost passenger service, and with our local airlines improving service between the smaller cities and towns of our nation, American air transportation is reaching its maturity as an industry, not limited to any special class or area, either financial or geographic. It is here permanently to serve all in this broad land of ours and across all the continents of the world—and its future is as inspiring and boundless as the far horizon.

[1] Sections of address omitted as largely repeating Enid, Oklahoma address.

INTERNATIONAL REVIEW*

INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO)

EXCERPTS FROM THE REPORT OF THE PRESIDENT OF THE COUNCIL PREPARED FOR ITS 26th SESSION, OCTOBER 1955

THE President of the Council reported that the Economic and Social Council had now adopted a new procedure for reviewing the reports of the specialized agencies. This year's reports were presented as a whole, with a general introductory commentary by the Secretary General of the United Nations in his capacity as chairman of the Administrative Committee on Co-ordination. He referred especially to major common trends and to major changes of emphasis in the activities of the United Nations and specialized agencies, as well as to developments in the co-ordination of their activities. The matters treated were generally of greater concern to International Labor Organization, World Health Organization, Unesco and Food & Agricultural Organization of the United Nations than to ICAO and the other transport and communications agencies. There was therefore no specific discussion of ICAO's report as in past years.

The Council of Europe had invited the attendance of ICAO representatives at the meetings of the Consultative Assembly in Strasbourg in the latter part of October. The agenda includes discussion of the report of our Strasbourg Conference of 1954. The President of the Council regretted to have to report that there had been no further ratifications to the Geneva Convention, or that of Rome. His inquiries in those cases had brought assurance of intention on the part of 5 States to act on the Rome Convention and 3 on the Geneva Convention when the necessary studies could be completed and the necessary amendments to national legislation made. In some of these cases, however, the notification of intent came with a warning that it may take two or three years.

The President of the Council reported that the new Trainee Course (the ninth of the series) started on September 1st with seven members chosen from among sixteen applicants. They came from Bolivia, Ecuador, Honduras, Belgium, Ethiopia, Japan, and the United Kingdom (Singapore). Almost all had been working in their governments on some aspect of civil aviation, technical, administrative or legal, before coming to Montreal; and some had already been particularly concerned with ICAO's work.

The Airworthiness Panel finished its second meeting on July 8th in Paris, after four weeks of meeting. It assumed its own work to be at an end, and produced a final report with Annex material and a statement of "Acceptable Means of Compliance." The Panel's treatment of the vexing question of performance regulation was inconclusive. A majority of the group favored basing the only Acceptable Means of Compliance for the present on the type of regulation that appears in the present text of Annexes 8 (Airworthiness of Aircraft) and 6 (Operation of Aircraft—International Commercial Air Transport), while referring the means of taking future advantage of the work done on performance regulation in the past six years in the Standing Committee on Performance and elsewhere to a future Divisional meeting to determine. The Panel recommended that ICAO convene such a meeting, which would discuss the Panel's work as

* Compiled by J. G. Gazdik in co-operation with Dr. G. F. Fitzgerald and Mr. A. M. Lester (ICAO) and Miss S. F. Macbrayne.

a whole. Excepting the treatment of performance, there was substantial agreement both on Standards and on Acceptable Means of Compliance (following the basic decision taken in the Panel's initial session regarding the relation of the two types of material).

There had been a marked increase in interest in the Panel on teletypewriter questions which the Council established on 27 May 1955. Although only five States had stated their wish of naming representatives to the Panel in response to the original inquiry of last January, a total of ten have now done so, including two that had specifically declared in reply to the previous inquiry that they would not participate.

State comments on the draft provisional agreement (ICAO-International Telecommunication Union) on the handling of Class B messages were circulated to States, together with a Secretariat analysis, in July and August. Similar action was taken by the International Telecommunication Union Secretariat. Prior to circulation the analyses and suggestions prepared by the respective secretariats were exchanged and commented upon. Unfortunately, however, differences of opinion on how an analysis could best be presented caused substantial differences in the documents finally circulated by the respective organizations.

Trials of a system of "prearranged communication services" were initiated September 26th in a portion of the European-Mediterranean Region pursuant to Council action on Recommendation 23 of the Special European-Mediterranean Communications Meeting (Paris, November 1954). Procedures for the trials and arrangements for their introduction were initiated by the United Kingdom. States participating are: Netherlands, Western Germany, Denmark, Sweden, Luxembourg, Austria, Switzerland, United Kingdom, and possibly Greece, Turkey, and Yugoslavia.

Amendment 21 of Annex 10 (Aeronautical Telecommunications) became effective 1 September 1955. There had been no disapprovals.

The good number of replies already received to the State letter on proposed amendments to "the spelling alphabet," mailed at the end of July, show a gratifying readiness to accept the conclusions reached in the Air Navigation Commission and Council. Though a number of answers express opinions on the changes under consideration, or make new suggestions, most conclude in effect that they would accept whatever was decided in ICAO.

A new edition of Annex 3 (Meteorological Codes) was issued in September. By the date of notification of disapprovals (1 August 1955) some disapprovals had been received, in particular regarding the Standards relating to the provision of operators' local representatives with meteorological information in excess of that required by pilots-in-command. These disapprovals re-emphasized the need for further consideration of the relationship between the newly developing concept of operational control with that of the provision of meteorological service for international operations. Simultaneously with the issue of the new Annex 3 (Meteorological Codes) and Procedures for Air Navigational Services-Meteorological were issued to States. The texts of both Annex 3 and Procedures for Air Navigational Services-Meteorological were adopted by the 2nd Congress of World Meteorological Organizations, held in the Spring, for inclusion, *in toto*, in its Technical Regulations. The production of both documents took place in close coordination with World Meteorological Organizations, which will use the ICAO models for various attachments to Annex 3 and the Procedures for Air Navigational Services-Meteorological in its equivalent publications.

A complete redraft of the Supplementary Procedures-Meteorological for all Regions, prepared by the secretariat following the establishment of the new Annex 3 (Meteorological Codes) and Procedures for Air Navigational Services-Meteorological, was circulated to States during the summer months. There was a particluarly good response by States to the invitation of the

Secretary General for comment on this draft, and the comments were generally favorable. The proposed redraft will be submitted to the Air Navigation Commission during the present session.

More than 30 States have responded to ICAO's inquiry of last April about the studies in progress on problems of flight-crew fatigue and the measures adopted to avert fatigue. Nearly half of those replying have studies of their own in progress or in prospect. A considerable proportion have established flight-time limitations by regulation, while others are requiring action by the operator in accordance with governmentally-approved principles. Several States urged that ICAO take further action, at least to collect and circulate the fullest possible information. The Air Navigation Commission has already considered the subject, and its report to Council is in preparation.

A general review of correspondence received from States in recent months regarding the application of amendments to Annexes, or differences which will exist in respect of such amendments, shows exceptionally thorough and informative response since the practice of supplying detailed explanatory notes on implementation of particular amendments and the reporting of differences in respect to those specific cases was introduced late in 1954. There has been an encouragingly widespread readiness to report differences precisely in the form (in tabulations or otherwise) requested in the State letters.

In June the Secretary General, at the request of the Air Navigation Commission, asked that States having experience with weather warning by airborne radar supply any available information on that subject, pursuant to the Meteorological Division's recommendation that a panel of experts prepare a guide to the interpretation of radar indications of the weather. Two States have given such information. One of the two implies that the question is premature, and that it could be much better answered with another year's experience. Other States have replied that they had nothing to offer; though one or two of them, too, believed that they could help when their pending experiments were complete.

During the summer it was confirmed that world-wide standardization of the format and much of the content of Air Almanacs is now almost complete, as the ultimate consequence of arrangements started in ICAO during the last Aeronautical Maps and Charts Division session three years ago.

The response to the State letter of last February about aircraft rescue and fire fighting equipment and operating procedures (Air Navigation 4/13.2 — 975) has been somewhat scanty, only 9 States having given more than a mere acknowledgment. Among those who have replied, however, marked interest was evident, and a general desire that ICAO continue to work on the matter, with some specific suggestions for the points on which the work might best be concentrated. Two Governments and International Federation of Air Line Pilots Associations supplied exhaustive analyses of the problem of detailed and comprehensive specifications of the measures that they had taken to deal with it.

FINAL ACT OF THE INTERNATIONAL CONFERENCE

On Private Air Law Held Under the Auspices of the International Civil Aviation Organization at The Hague in September 1955

The Delegates at the international Conference on private air law held under the auspices of the International Civil Aviation Organization met at The Hague, on the invitation of the Government of the Netherlands, from 6 September to 28 September 1955, for the purpose of considering a draft

protocol, prepared by the Legal Committee of the International Civil Aviation Oragnization, to amend the Convention for the Unification of Certain Rules relating to International Carriage by Air signed at Warsaw on 12 October 1929.

The Delegates elected as President Dr. D. Goedhuis, Chief of the Netherlands Delegation, and further elected as Vice-Presidents Messrs. A. Ambrosini (Italy), K. M. Beaumont (United Kingdom), T. Findzinski (P.R. of Poland) and C. Gómez Jara (Spain). The Conference decided to establish a Credentials Committee, a Committee on Rules of Procedure, a Drafting Committee and a Committee on Final Clauses.

I

Following their deliberations, the above-mentioned Delegates formulated the text of a Protocol to amend the Convention for the Unification of Certain Rules relating to International Carriage by Air signed at Warsaw on 12 October 1929. The said Protocol has been opened for signature this day at The Hague and will remain open for signature until it comes into force.

II

The Conference furthermore adopted the following resolutions and recommendations:

A. THE CONFERENCE, BEING OF THE OPINION that nothing in the Warsaw Convention, as now in force, prevents the issue of a negotiable air waybill. DECLARES that Article IX of the Protocol to Amend the Warsaw Convention has been inserted therein only for the purpose of clarification.

B. THE CONFERENCE, RECOGNIZING that the national legislations of some States establish systems for the guarantee of the payment of compensation in cases of liability of the air carrier, and CONSIDERING that, in the meetings of the Legal Committee of the International Civil Aviation Organization which have studied the revision of the Warsaw Convention, proposals have been made to establish a guarantee for the payment of compensation, with the support of the Delegates of several States, who have thus shown their desire to bring about uniformity of air law in this regard, RECOMMENDS to the Council of the International Civil Aviation Organization that it instruct the Secretariat and Legal Committee

a) to make a study of a system of guarantees for the payment of compensation in the case of liability of the air carrier, in pursuance of the Warsaw Convention; and, if it is considered advisable,

b) to ask the States for information concerning the provisions of national legislations which have adopted such a system, as well as their opinion as to the possibility of extending the system to international air transport, by means of compulsory insurance, a bank guarantee or a cash deposit.

C. THE CONFERENCE, CONSIDERING that neither the Convention Warsaw nor the Protocol to amend the said Convention signed at The Hague on 28 September 1955, contains rules relating to the execution of judgments rendered under the Convention or the Protocol,

INVITES the International Civil Aviation Organization to consider whether it is desirable to include, in the Warsaw Convention, rules relating to procedure in cases arising under the Convention, including the execution of judgments.

D. THE CONFERENCE, HAVING CONSIDERED the report of the Sub-Committee of the Legal Committee of the International Civil Aviation Organization on the charter and hire of aircraft, AND BEING OF THE OPINION that the matter is of too great complexity to permit the insertion of provisions relating thereto in the Protocol to Amend the Warsaw Convention, BUT CONSIDERING that the matter is of considerable practical importance in view

of the extent of charter and hire arrangements and requires further study, RECOMMENDS to the International Civil Aviation Organization that this subject should be further studied by that organization.

E. THE CONFERENCE, CONSIDERING that the uniform interpretation of the Warsaw Convention and of the Protocol to amend the said Convention as well as of other existing private air law conventions, is of vital importance for the unification of private air law aimed at by these conventions, CONSIDERING ALSO that the international nature of the situations to which these conventions apply, especially in connection with the distribution of the amounts to which liability is limited in some of these conventions, raises certain serious problems which cannot easily be solved otherwise than by means of some international legal forum, CONSIDERING FURTHER that the problems envisaged in the foregoing are so complicated that a complete study will require much time, RECOMMENDS that such international bodies and organizations, as are responsible for or interested in the development of international private air law, commence as soon as possible to study the problems involved in the promotion of uniform interpretation of the international private air law conventions and in the international settlement of disputes arising under said conventions.

IN WITNESS WHEREOF the Delegates have signed this Final Act. DONE at The Hague on the twenty-eight day of September One Thousand Nine Hundred and Fifty-five, in three authentic texts in the English, French and Spanish languages, in two copies which shall be deposited in the archives of the International Civil Aviation Organization and a certified copy of which shall be delivered to the Government of the People's Republic of Poland and to all other Governments represented at the Conference.

PROTOCOL TO AMEND THE CONVENTION

For the Unification of Certain Rules Relating to International Carriage by Air Signed at Warsaw on 12 October 1929

THE GOVERNMENTS UNDERSIGNED, CONSIDERING that it is desirable to amend the Convention for the Unification of Certain Rules Relating to International Carriage by Air signed at Warsaw on 12 October 1929, HAVE AGREED as follows:

CHAPTER I — AMENDMENTS TO THE CONVENTION

Article I

In Article 1 of the Convention —

a) paragraph 2 shall be deleted and replaced by the following: —

"2. For the purposes of this Convention, the expression *international carriage* means any carriage in which, according to the agreement between the parties, the place of departure and the place of destination, whether or not there be a break in the carriage or a transhipment, are situated either within the territories of two High Contracting Parties or within the territory of a single High Contracting Party if there is an agreed stopping place within the territory of another State, even if that State is not a High Contracting Party. Carriage between two points within the territory of a single High Contracting Party without an agreed stopping place within the territory of another State is not international carriage for the purposes of this Convention."

b) paragraph 3 shall be deleted and replaced by the following: —

"3. Carriage to be performed by several successive air carriers is deemed, for the purposes of this Convention, to be one undivided carriage if it has been regarded by the parties as a single operation, whether it had been agreed upon under the form of a single contract or of a series of contracts, and it does not lose its international character merely because one contract or a series of contracts is to be performed entirely within the territory of the same State."

Article II

In Article 2 of the Convention —

paragraph 2 shall be deleted and replaced by the following: —

"2. This Convention shall not apply to carriage of mail and postal packages."

Article III

In Article 3 of the Convention —

a) paragraph 1 shall be deleted and replaced by the following: —

"1. In respect of the carriage of passengers a ticket shall be delivered containing:

a) an indication of the places of departure and destination;

b) if the places of departure and destination are within the territory of a single High Contracting Party, one or more agreed stopping places being within the territory of another State, an indication of at least one such stopping place;

c) a notice to the effect that, if the passenger's journey involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention may be applicable and that the Convention governs and in most cases limits the liability of carriers for death or personal injury and in respect of loss of or damage to baggage."

b) paragraph 2 shall be deleted and replaced by the following: —

"2. The passenger ticket shall constitute *prima facie* evidence of the conclusion and conditions of the contract of carriage. The absence, irregularity or loss of the passenger ticket does not affect the existence or the validity of the contract of carriage which shall, none the less, be subject to the rules of this Convention. Nevertheless, if, with the consent of the carrier, the passenger embarks without a passenger ticket having been delivered, or if the ticket does not include the notice required by paragraph 1 *c*) of this Article, the carrier shall not be entitled to avail himself of the provisions of Article 22."

Article IV

In Article 4 of the Convention —

a) paragraphs 1, 2 and 3 shall be deleted and replaced by the following: —

"1. In respect of the carriage of registered baggage, a baggage check shall be delivered, which, unless combined with or incorporated in a passenger ticket which complies with the provisions of Article 3, paragraph 1, shall contain:

a) an indication of the places of departure and destination;

b) if the places of departure and destination are within the territory of a single High Contracting Party, one or more agreed stopping places being within the territory of another State, an indication of at least one such stopping place;

c) a notice to the effect that; if the carriage involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention may be applicable and that the

Convention governs and in most cases limits the liability of carriers in respect of loss of or damage to baggage."

b) paragraph 4 shall be deleted and replaced by the following: —

"2. The baggage check shall constitute *prima facie* evidence of the registration of the baggage and of the conditions of the contract of carriage. The absence, irregularity or loss of the baggage check does not affect the existence or the validity of the contract of carriage which shall, none the less, be subject to the rules of this Convention. Nevertheless, if the carrier takes charge of the baggage without a baggage check having been delivered or if the baggage check (unless combined with or incorporated in the passenger ticket which complies with the provisions of Article 3, paragraph 1 *c*) does not include the notice required by paragraph 1 *c*) of this Article, he shall not be entitled to avail himself of the provisions of Article 22, paragraph 2."

Article V

In Article 6 of the Convention —

paragraph 3 shall be deleted and replaced by the following: —

"3. The carrier shall sign prior to the loading of the cargo on board the aircraft."

Article VI

Article 8 of the Convention shall be deleted and replaced by the following: —

"The air waybill shall contain:

a) an indication of the places of departure and destination;

b) if the places of departure and destination are within the territory of a single High Contracting Party, one or more agreed stopping places being within the territory of another State, an indication of at least one such stopping place;

c) a notice to the consignor to the effect that, if the carriage involves an ultimate destination or stop in a country other than the country of departure, the Warsaw Convention may be applicable and that the Convention governs and in most cases limits the liability of carriers in respect of loss of or damage to cargo."

Article VII

Article 9 of the Convention shall be deleted and replaced by the following: —

"If, with the consent of the carrier, cargo is loaded on board the aircraft without an air waybill having been made out, or if the air waybill does not include the notice required by Article 8, paragraph *c*), the carrier shall not be entitled to avail himself of the provisions of Article 22, paragraph 2."

Article VIII

In Article 10 of the Convention —

paragraph 2 shall be deleted and replaced by the following: —

"2. The consignor shall indemnify the carrier against all damage suffered by him, or by any other person to whom the carrier is liable, by reason of the irregularity, incorrectness or incompleteness of the particulars and statements furnished by the consignor."

Article IX

To Article 15 of the Convention —

the following paragraph shall be added: —

"3. Nothing in this Convention prevents the issue of a negotiable air waybill."

Article X

Paragraph 2 of Article 20 of the Convention shall be deleted.

Article XI

Article 22 of the Convention shall be deleted and replaced by the following: —

"Article 22

1. In the carriage of persons the liability of the carrier for each passenger is limited to the sum of two hundred and fifty thousand francs. Where, in accordance with the law of the court seised of the case, damages may be awarded in the form of periodical payments, the equivalent capital value of the said payments shall not exceed two hundred and fifty thousand francs. Nevertheless, by special contract, the carrier and the passenger may agree to a higher limit of liability.

2. *a*) In the carriage of registered baggage and of cargo, the liability of the carrier is limited to a sum of two hundred and fifty francs per kilogramme, unless the passenger or consignor has made, at the time when the package was handed over to the carrier, a special declaration of interest in delivery at destination and has paid a supplementary sum if the case so requires. In that case the carrier will be liable to pay a sum not exceeding the declared sum, unless he proves that that sum is greater than the passenger's or consignor's actual interest in delivery at destination.

b) In the case of loss, damage or delay of part of registered baggage or cargo, or of any object contained therein, the weight to be taken into consideration in determining the amount to which the carrier's liability is limited shall be only the total weight of the package or packages concerned. Nevertheless, when the loss, damage or delay of a part of the registered baggage or cargo, or of an object contained therein, affects the value of other packages covered by the same baggage check or the same air waybill, the total weight of such package or packages shall also be taken into consideration in determining the limit of liability.

3. As regards objects of which the passenger takes charge himself the liability of the carrier is limited to five thousand francs per passenger.

4. The limits prescribed in this article shall not prevent the court from awarding, in accordance with its own law, in addition, the whole or part of the court costs and of the other expenses of the litigation incurred by the plaintiff. The foregoing provision shall not apply if the amount of the damages awarded, excluding court costs and other expenses of the litigation, does not exceed the sum which the carrier has offered in writing to the plaintiff within a period of six months from the date of the occurrence causing the damage, or before the commencement of the action, if that is later.

5. The sums mentioned in francs in this Article shall be deemed to refer to a currency unit consisting of sixty-five and a half milligrammes of gold of millesimal fineness nine hundred. These sums may be converted into national currencies in round figures. Conversion of the sums into national currencies other than gold shall, in case of judicial proceedings, be made according to the gold value of such currencies at the date of the judgment."

Article XII

In Article 23 of the Convention, the existing provision shall be renumbered as paragraph 1 and another paragraph shall be added as follows: —

"2. Paragraph 1 of this Article shall not apply to provisions governing loss or damage resulting from the inherent defect, quality or vice of the cargo carried."

Article XIII

In Article 25 of the Convention —
paragraphs 1 and 2 shall be deleted and replaced by the following: —

"The limits of liability specified in Article 22 shall not apply if it is proved that the damage resulted from an act or omission of the carrier, his servants or agents, done with intent to cause damage or recklessly and with knowledge that damage would probably result; provided that, in the case of such act or omission of a servant or agent, it is also provided that he was acting within the scope of his employment."

Article XIV

After Article 25 of the Convention, the following article shall be inserted: —

"Article 25 A

1. If an action is brought against a servant or agent of the carrier arising out of damage to which this Convention relates, such servant or agent, if he proves that he acted within the scope of his employment, shall be entitled to avail himself of the limits of liability which that carrier himself is entitled to invoke under Article 22.

2. The aggregate of the amounts recoverable from the carrier, his servants and agents, in that case, shall not exceed the said limits.

3. The provisions of paragraphs 1 and 2 of this article shall not apply if it is proved that the damage resulted from an act or omission of the servant or agent done with intent to cause damage or recklessly and with knowledge that damage would probably result."

Article XV

In Article 26 of the Convention —
paragraph 2 shall be deleted and replaced by the following: —

"2. In the case of damage, the person entitled to delivery must complain to the carrier forthwith after the discovery of the damage, and, at the latest, within seven days from the date of receipt in the case of baggage and fourteen days from the date of receipt in the case of cargo. In the case of delay the complaint must be made at the latest within twenty-one days from the date on which the baggage or cargo have been placed at his disposal."

Article XVI

Article 34 of the Convention shall be deleted and replaced by the following: —

"The provisions of Articles 2 to 9 inclusive relating to documents of carriage shall not apply in the case of carriage performed in extraordinary circumstances outside the normal scope of an air carrier's business."

Article XVII

After Article 40 of the Convention, the following Article shall be inserted: —

"Article 40 A

1. In Article 37, paragraph 2 and Article 40, paragraph 1, the expression *High Contracting Party* shall mean *State*. In all other cases, the expression *High Contracting Party* shall mean a State whose ratification of or adherence to the Convention has become effective and whose denunciation thereof has not become effective.

2. For the purposes of the Convention the word *territory* means not only the metropolitan territory of a State but also all other territories for the foreign relations of which that State is responsible."

CHAPTER II — SCOPE OF APPLICATION OF THE CONVENTION AS AMENDED

Article XVIII

The Convention as amended by this Protocol shall apply to international carriage as defined in Article 1 of the Convention, provided that the places of departure and destination referred to in that Article are situated either in the territories of two parties to this Proocol or within the territory of a single party to this Protocol with an agreed stopping place within the territory of another State.

CHAPTER III — FINAL CLAUSES

Article XIX

As between the Parties to this Protocol, the Convention and the Protocol shall be read and interpreted together as one single instrument and shall be known as the *Warsaw Convention as amended at The Hague, 1955.*

Article XX

Until the date on which this Protocol comes into force in accordance with the provisions of Article XXII, paragraph 1, it shall remain open for signature on behalf of any State which up to that date has ratified or adhered to the Convention or which has participated in the Conference at which this Protocol was adopted.

Article XXI

1. This Protocol shall be subject to ratification by the signatory States.

2. Ratification of this Protocol by any State which is not a Party to the Convention shall have the effect of adherence to the Convention as amended by this Protocol.

3. The instruments of ratification shall be deposited with the Government of the People's Republic of Poland.

Article XXII

1. As soon as thirty signatory States have deposited their instruments of ratification of this Protocol, it shall come into force between them on the ninetieth day after the deposit of the thirtieth instrument of ratification. It shall come into force for each State ratifying thereafter on the ninetieth day after the deposit of its instrument of ratification.

2. As soon as this Protocol comes into force it shall be registered with the United Nations by the Government of the People's Republic of Poland.

Article XXIII

1. This Protocol shall, after it has come into force, be open for adherence by any non-signatory State.

2. Adherence to this Protocol by any State which is not a Party to the Convention shall have the effect of adherence to the Convention as amended by this Protocol.

3. Adherence shall be effected by the deposit of an instrument of adherence with the Government of the People's Republic of Poland and shall take effect on the ninetieth day after the deposit.

Article XXIV

1. Any Party to this Protocol may denounce the Protocol by notification addressed to the Government of the People's Republic of Poland.

2. Denunciation shall take effect six months after the date of receipt by the Government of the People's Republic of Poland of the notification of denunciation.

3. As between the Parties to this Protocol, denunciation by any of them of the Convention in accordance with Article 39 thereof shall not be construed in any way as a denunciation of the Convention as amended by this Protocol.

Article XXV

1. This Protocol shall apply to all territories for the foreign relations of which a State Party to this Protocol is responsible, with the exception of territories in respect of which a declaration has been made in accordance with paragraph 2 of this Article.

2. Any State may, at the time of deposit of its instrument of ratification or adherence, declare that its acceptance of this Protocol does not apply to any one or more of the territories for the foreign relations of which such State is responsible.

3. Any State may subsequently, by notification to the Government of the People's Republic of Poland, extend the application of this Protocol to any or all of the territories regarding which it has made a declaration in accordance with paragraph 2 of this Article. The notification shall take effect on the ninetieth day after its receipt by that Government.

4. Any State Party to this Protocol may denounce it, in accordance with the provisions of Article XXIV, paragraph 1, separately for any or all of the territories for the foreign relations of which such State is responsible.

Article XXVI

No reservation may be made to this Protocol except that a State may at any time declare by a notification addressed to the Government of the People's Republic of Poland that the Convention as amended by this Protocol shall not apply to the carriage of persons, cargo and baggage for its military authorities on aircraft, registered in that State, the whole capacity of which has been reserved by or on behalf of such authorities.

Article XXVII

The Government of the People's Republic of Poland shall give immediate notice to the Governments of all States signatories to the Convention or this Protocol, all States Parties to the Convention or this Protocol, and all States Members of the International Civil Aviation Organization or of the United Nations and to the International Civil Aviation Organization:

a) of any signature of this Protocol and the date thereof;
b) of the deposit of any instrument of ratification or adherence in respect of this Protocol and the date thereof;
c) of the date on which this Protocol comes into force in accordance with Article XXII, paragraph 1;
d) of the receipt of any notification of denunciation and the date thereof;
e) of the receipt of any declaration or notification made under Article XXV and the date thereof; and
f) of the receipt of any notification made under Article XXVI and the date thereof.

IN WITNESS WHEREOF the undersigned Plenipotentiaries, having been duly authorized, have signed this Protocol.

DONE at The Hague on the twenty-eight day of the month of September of the year One Thousand Nine Hundred and Fifty-five, in the authentic texts in the English, French and Spanish languages. In the case of any inconsistency, the text in the French language, in which language the Convention was drawn up, shall prevail.

This Protocol shall be deposited with the Government of the People's Republic of Poland with which, in accordance with Article XX, it shall remain open for signature, and that Government shall send certified copies thereof to the Governments of all States signatories to the Convention or this Protocol, all States Parties to the Convention or this Protocol, and all States Members of the International Civil Aviation Organization or of the United Nations, and to the International Civil Aviation Organization.

AIR NAVIGATION CONFERENCE

The Second Air Navigation Conference which commenced its work in Montreal on August 30th, 1955 (reported in the last issue), ended on September 29th, 1955. A partial list of the results of the meeting is as follows:

Near-miss Reports. The Conference requested ICAO's member states to set up a system of reporting "near-misses" between aircraft in flight. The purpose of this is not to enforce existing rules of the air by taking disciplinary action against the pilots concerned but, by a systematic analysis of these near-misses and the determination of their causes, to find a way of avoiding them in the future.

Anti-collision Lights. Flashing high intensity lights which considerably increase chances of recognition under night flying or dull weather conditions will shortly become mandatory for heavier aircraft in at least one ICAO member state. Research is now being carried on in this field, and the Conference recommended that member states forward information to ICAO on the results of their trials and experiments.

Night Flying. The Conference recommended that ICAO revise its international standards to prohibit all flights in controlled airspace between sunset and sunrise unless these flights are carried out under air traffic control from the ground. This would prevent any night flights being carried out under Visual Flight Rules in controlled airspace unless specific permission is granted by the appropriate authorities.

Non-Controlled Flights. Because of the traffic complications which result from aircraft flying under Visual Flight Rules (not under ground control) in controlled airspace, the Conference proposed an amendment to the international standards on rules of the air which would bring under traffic control a number of flights now being made under VFR. In addition it suggested a vigorous educational program to persuade pilots not to fly under VFR wherever there is doubt about the practicability of completing the flight under Visual Flight Rules; other suggestions included increasing when necessary the controlled airspace to provide separate in-bound and out-bound routes, improvement of current air traffic services techniques, and the increased and coordinated use of radar.

Distance from Cloud. Visual Flight Rules specify the distance air traffic must keep away from cloud to avoid the danger of collision. The

Conference was of the opinion that the increased speed of modern aircraft, which greatly reduces the time available to pilots to avoid collisions, required an increase in these distances. The new standard would require that forward visibility be at least 8 kilometres (5 miles), and distance from cloud be 1.5 km. (1 mile) horizontally and 300 metres (1,000 feet) vertically. This compares with the present standard of 5 kilometres (3 miles) for forward visibility and 600 metres (2,000 feet) and 150 metres (500 feet) for horizontal and vertical distance from cloud.

The Conference believed that the lower flying speed and greater visibility and maneuverability of the helicopter would make it possible to use lower limits than those specified above for VFR flights. It also recommended that helicopters be allowed to operate in reduced visibility conditions outside controlled airspace at heights below 200 metres (700 feet), although fixed-wing aircraft are not allowed to do so.

Helicopters. Although existing marshalling signals (hand signals used to direct aircraft taxiing on the ground) are applicable to helicopters, they provide little guidance for landing from a hovering position. The Conference therefore devised a new set of signals to be used for this purpose.

Other subjects discussed by the conference included the determination of the optimum siting of Instrument Landing System marker beacons and of the location of the ILS reference point and its relationship to visual landing aids, an exchange of views on the problems of specifying aerodrome meteorological minima with particular regard to visibility, requirements of air traffic services for communications between aerial control centers, and determination of the operational requirements for long distance navigational aids.

FACILITATION SESSION OF ICAO

The Third Session of the Facilitation Division of ICAO completed a 15-day session at Manila in the Philippines on October 24th, 1955. Among the items on the Agenda were questions pertaining to: — the entry and departure of passengers, non-scheduled flights, helicopters and jets, development of air cargo clearance procedures to complement the recommendations of the General Agreements on Tariffs and Trade (GATT) which were designed to facilitate the smooth passage of goods from one country into another. Means of speeding up the handling of air cargo, airmail and baggage were also discussed.

Fifty-two important changes to the International Standards and Recommended Practices on Facilitation were recommended and seventeen other recommendations, designed to reduce formalities involved in the crossing of frontiers, were made. These recommendations, of course, must be approved by the Council of ICAO before they can come into effect.

They include the adoption of a policy aimed at the early elimination of the passenger manifest and the later elimination of the embarkation/disembarkation card; this involves the acceptance by member states of a general declaration signed by an authorized agent. The amendments will assist the operation of non-scheduled aircraft, for they simplify existing requirements for these aircraft to give notice of arrival in foreign countries and to receive prior permission for their flights; also in future, if these recommendations are accepted, non-scheduled aircraft which remain in a foreign country for not more than 48 hours will not require a "carnet de douanes."

The meeting arrived at a definition of the term "tourist" for the guidance of immigration officials and took action to simplify the problems of visas and to re-define the terms "free airport" and "free zone." Because of the problems posed by the introduction of jet and helicopter aircraft, the

meeting recommended the careful study of terminal installations to see whether waiting time on the ground could be reduced. In the field of customs the new amendments involve the acceptance of oral passenger baggage declarations and the preferential treatment of airmail and its elimination in the air cargo manifest. Aircraft spare parts on loan are to be free of duty, as is airline training material. The simplification of customs documentation is also required.

Other recommendations provide for the simplification and standardization of the present embarkation/disembarkation card, including the reduction of the number of questions on this card from 20 to 10. The validity of entrance visas is extended to 12 months, and the acceptance of the E/D card for entry purposes is recommended. The proposed amendments prohibit the withdrawal of passports from passengers; they involve the partial elimination of crew manifests, and the waiving of documentation required for direct transit passengers. Simplification of the procedures for freeing aircraft from insects which may carry disease, and the provision of facilities for direct transit crews and passengers free from possible contamination by insects, are required. Standardized plant and animal documentation and sanitary requirements and procedures are laid down.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

11th ANNUAL GENERAL MEETING OF IATA, October 17th-21st, 1955, at New York

The 11th Annual General Meeting, and the 10th Anniversary Meeting, was held in New York between the above mentioned dates. Mr. Juan T. Trippe, President of Pan American World Airways, took office at the opening of the meeting and will continue as President until the Annual Meeting next year in Edinburgh when Lord Douglas of Kirtleside, Chairman of British European Airways, will take over office. Reports were submitted to the meeting by the Director General, Sir William P. Hildred, and by the Executive, Financial, Technical, Traffic and Legal Committees.

Executive Committee Report

Among other subjects dealt with were Charges for Airports and Facilities and the new Prorate Agency. With regard to the first subject, the Committee urged the airlines to continue opposition to the imposition of passenger service charges at international airports. "Efforts to have these charges removed or replaced by some more equitable and less cumbersome methods of collecting revenues have been made by IATA at various levels, but so far without success," the report said. "We do not, however, intend to give up and will continue to look for opportunities to mobilize opinion against this inequitable form of charging."

Charges for air navigation facilities are under study by ICAO, the report stated. It said it is likely that ICAO's final report may confine itself to stating the pros and cons of such charges without recommending definite conclusions. "However," it added, "there is some danger that the report may be weighted in favor of charging, and IATA will endeavor to argue against this tendency and to stress that full weight should be given in the ICAO report to the benefits which the community derives from the facilities and to the fact that civil aviation is only one of the many users of them." The Committee also noted that charges for airports is scheduled for discussion in an intergovernmental conference under ICAO auspices in the late part of 1956 or early in 1957.

Establishment of an IATA Prorate Agency was announced by the Committee. Prorating is the term applied to the division of revenue from

interline passenger and cargo transport between the participating carriers. The Report pointed out that the great expansion of interline traffic created millions of prorate situations a year. In order to keep up with the resulting accounting problems involved, the airlines have been meeting informally for the past five years to set up agreed prorate tables which are published in manual form.

Financial Committee Report

The following is a summary of the report of the IATA Financial Committee, submitted to the organization's Tenth Anniversary General Meeting. It reported that exchange controls and fluctuations still plague the international airlines and make it difficult, in many cases, for carriers to bring to their home treasuries at full value the revenues which they earn in other countries. During the past year, the committee has canvassed the possibilities of some drastic easement, such as convertibility of currencies on a wide scale, but has had to conclude that it "does not anticipate any immediate panacea." It was mentioned that problems of revenue transfer and discriminatory currency controls have been greatly eased in Europe during the past two years, due in large measure to the aid of the Organization for European Economic Cooperation. Asserting that the airlines had found OEEC "most helpful and cooperative," the committee noted that no difficulties have been reported by members during the past 12 months with regard to the transfer of revenue in the OEEC countries, with the exception of one country.

The Committee reported that it had examined and found "impracticable" proposals put forward at the last IATA General Meeting in Paris that the airlines create an IATA Monetary Unit to serve as a basis for international airline fares and accounting in the absence of a single accepted worldwide currency standard. In addition, the proposal that fares and rates be expressed in Postal Gold Francs had also been examined and discarded. In any case, the IATA Clearing House, in London, now in its ninth year of operations, will continue to serve the 46 member airlines either directly or through the link with the Airlines Clearing House, Inc., in the U. S. The Clearing House provided them with the means of settling their worldwide interline business in either dollars or sterling which is freely convertible into their home currencies. Turnover in the Clearing House during 1954 rose 19 per cent to $287,000,000—an increase of $45,000,000 over 1953.

Further successful efforts towards standardization and simplification of the settlement of interline transactions was reported on behalf of the Committee's Sub-Committee on Interline Revenue Accounting Manual, which is of increasing value to the industry as the volume of interline business expands, the Committee said. This increase in the volume of interline transactions has inevitably led to rising accounting costs, and a new technique for settling interline passenger accounts on a sampling basis has been devised and will be tried out in certain areas during the coming winter. The new basis may provide sufficient accuracy of accounting while dispensing with a great deal of the clerical work required by orthodox methods, it added.

It also revealed that a second study is being made of the possibility of establishing a centralized agency for settling interline cargo transactions, which it termed "an important and complex financial problem." The Committee also reported that a special Taxation Sub-Committee has been created during the past year to deal with the growing tendency by governments to tax a wide range of aspects of international operations, and to make suggestions on a cooperative basis among the airlines for equitable solutions to the problems which are currently arising.

Technical Committee Report

The Report emphasized the necessity for improving navigation aids and ground organization, the condition of which at the present time left a great deal to be desired. Were improvements not to be effected quickly enough, the economic future of the industry might find itself threatened. The Report stated that airlines had on order expensive new aircraft, running into billions of dollars, which is was understood would be flown at reduced seat-mile cost. It was generally loosely assumed that the new craft would be operated under almost technically perfect conditions. However, if the various problems with which the industry was forced to live today were not eliminated—*e.g.*, the need to carry excessive fuel loads, delays in departure, slow handling due to inadequate terminal facilities, inefficient routing or assignment to uneconomic altitudes due to inflexible air traffic control, excessive flight time resulting from inadequate and delayed meteorological information and inefficient communications—the advantages of possessing up-to-date aircraft would be doubtful and, what is important, airline operators would be considerably handicapped in their efforts to satisfy the demands of the general public.

The Report also dealt with Penalties imposed by Statutes. A comprehensive review of legislative restrictions as they affect air operations, undertaken in the 1955 Technical Conference at Puerto Rico, had indicated that airlines were suffering additional economic penalties from variations in the interpretation and application of national and international air regulations, the Report said. Specific action to alleviate these difficulties was now being planned. As an example of the kind of restriction which was their target, the Technical Committee cited the fact that one country still required airlines to adhere to rules laid down during the early days of radio. Thus, while radio telegraphy had since been replaced by radio-telephone, "strange situation exists whereby operators have to carry an additional crew member as a radio operator who has no duties to perform and, indeed, no equipment on board with which to perform any duties." This was only one illustration of how national law, if not amended to keep in step with the rapid technical advancement of our operation, could become both costly and meaningless," the Report said.

The Report, which was lengthy and comprehensive, also treated the following subjects: — Approach and Landing, Fog Dispersal Lighting, Instrument Flight Rules and Visual Flight Rules Criteria, Operational Control, Meteorology, Communications, Navigation Aids, Airborne Radar, Maintenance and Overhaul, Turbine Fuels, Aircraft Noise, Helicopters, Regional Activity, etc. Lack of space precludes publication of the full text but anyone particularly desirous of obtaining this information may apply to IATA, International Aviation Building, Montreal, Que.

Legal Committee Report

During the year, the Legal Committee held its 16th and 17th Meetings at Rome and Princeton, New Jersey, respectively. At Princeton, the Committee discussed certain problems arising out of the Protocol adopted at The Hague to amend the Warsaw Convention. On the one hand, the Committee was impressed by the fact that the Protocol contained clarification of several ambiguities under the present Warsaw Convention and simplification of provisions relating to traffic documents. On the other hand, the Committee was advised that the fact that the limits of carrier's liability were increased, might produce a considerable increase in the insurance premiums which carriers would have to pay and which might be reflected in the fares charged by IATA Members. It was the view of the Committee

that the implications of the Protocol were far reaching and that the Committee and other interested groups in IATA would have to study the problems raised by the Protocol in order to make recommendations to IATA as to the position it should take with respect to the ratification of the Protocol by States. The Committee has put the question on the Agenda of its next meeting.

In view of the CAB Order tentatively disapproving the proposed IATA Conditions of Carriage in Resolution 030, a Special IATA Committee, under the Chairmanship of Professor John C. Cooper, began consultations with the CAB staff. The consultations aimed first at finding a compromise solution to the several objections which were made by the CAB on the IATA Conditions of Carriage. During the consultations, it appeared, however, that it would be more practicable to obtain agreement with the CAB first on the much shorter conditions on the Ticket and the Air Waybill and to attempt agreement on the more voluminous Conditions of Carriage subsequently. At the time of reporting, the Special Committee was not in a position to indicate the results of its deliberations, the language of the contract on the Passenger Ticket and Air Waybill not having as yet been finalized. It is hoped, however, that the consultations with the CAB will result in maintaining the present worldwide uniformity with respect to the Ticket and Air Waybill. It is also hoped that it will be possible to find a way in which the Conditions of Carriage can be made effective on a worldwide basis. Next year will be the testing time, and it is hoped that nothing will occur which might disrupt the worldwide uniformity which the IATA Conditions of Carriage attempt to achieve.

Discussions have also taken place with the staff of the Canadian Air Transport Board which raised questions affecting Canadian tariff laws. As a result of these discussions with the ATB, the Special Committee is now aware of the main points on which the Canadian Board seeks clarification and it is expected that a solution can be found for these problems, at the same time as a solution is found to the CAB objections.

The Committee devoted considerable time to consideration of the Draft of a proposed Interline Cargo Claims Procedures Agreement which had been the subject of a study between a Joint Meeting of the Insurance Subcommittee and Members of the Legal Sub-committee on Traffic Matters, held in New York on October 7th, 1955. The object of establishing this document is: 1) to secure and preserve harmonious relationships in claim matters among carriers, and between carriers and the public; and 2) to effect prompt and equitable apportionment among carriers of amounts paid and expenses incurred in the settlement of claims and thereby; 3) to effect and maintain a prompt and efficient service to the public in connection with the investigation and settlement of air cargo claims. The new document, when implemented, will permit small cargo claims below a minimum amount and of a concealed loss nature, to be settled with the minimum amount of delay.

Traffic Conferences Report

The last issue carried information concerning results of the meeting of IATA Traffic Conferences at Palmas, Majorca, in July 1955. Prior to the AGM, there was a Composite Traffic Conference Meeting at Miami, Florida. The Report of the Traffic Conferences to the AGM dealt with, among other matters, G.I. Discounts, Foreseeable Price Trends, Polar Rating, Simplification of the Airlines Rating machinery, Through Traffic and Through Handling Procedures and Documents—a subject which grows more pressing with each year's increase in traffic.

With regard to Price Trends, remarks were confined mainly to inter-

national traffic trends foreseeable in the coming year. The hope was expressed that the airlines would continue to hold the line on the cost of basic air transport in tourist class by cutting costs through simplification of handling and other procedures; by increasing traffic through such means as off-season family fares over the North Atlantic and special night fares in Europe, etc. Increases of up to 10 per cent for first class service on most world routes, voted by the Conferences to take effect next April 1, have been designed primarily to compensate the airlines for the cost of supplying the greater luxury demanded by first class passengers, rather than to swell the net revenue of operation.

On the subject of Polar Fares, it was reported that while the Miami meeting had succeeded in reaching short-term agreement on fares and rates between the continents via Polar routings, a long term solution for this problem would be one of the pressing tasks of the 1956 Conferences. The differences in distances over Polar routings as against the more orthodox tracks of east-west international flying may disrupt the whole balance of the present structure of inter-related fares and rates, the report said, while the matter is made the more difficult by "the highly competitive background." Because Polar routes between Europe and the Pacific will not be regularly operated until next Fall, the situation is still too fluid for definite settlement but by the time the Conferences meet in 1956 it will be obviously imperative that a permanent solution be found.

Regarding Helicopter services, they have their own peculiar characteristics and usefulness, but are also supplementary fixed wing routes, and while they must be related to the latter for inter-line traffic purposes, they must have sufficient freedom to develop in their own way.

Reference was made to the increasing complexity of negotiations in the Conferences and the problems encountered in obtaining necessary government approvals for their resolutions. Attention was also called to a tendency on the part of governments to upset delicately balanced agreements by conflicting or unnecessary alterations to Conference resolutions and carriers were advised not to inspire governments to make changes which they were themselves unable to secure in Conference negotiation. "We have, of course," said the Chairman of the Traffic Conferences, "always been plagued by minor government reservations, conditions and deferments, usually made in order to protect some philosophy dear to the heart of one government. In this form, they have been a kind of inevitable nuisance and we have always had hopes that they would automatically diminish as more governments become educated to the needs of international uniformity."

OBSERVATIONS AND COMMENTS ON FOREIGN CASES

Engeli et al. vs. Swissair.

Tribunal de 1re instance de Genève, March 8, 1955 (Revue française de droit aérien, 1955, 335 ss.).

Facts: Plaintiffs, a firm of architects domiciled at Geneva, Switzerland, planned to take part in an international competition for the reconstruction of Izmir City, Turkey, in which a time limit was set for delivery of projects on December 15, 1951. After some correspondence, during which defendant was fully informed about the importance of that limit, the case containing the projects elaborated by plaintiffs was handed over to defendant's office at Geneva on November 23, 1951, under the usual air waybill, for air transportation to Istanbul, where defendant's representative would have to send it to Izmir by surface transportation without delay. The case was deviated at Istanbul (allegedly by confusion with another case) and did not reach Izmir until April 9, 1952. Plaintiffs claimed damages for Sw. frs. 150,000.00.

The Court: Turkey is not a party to the Warsaw Convention, and the transportation was therefore not "international" within the meaning of Art. 1, para. 2 of the Convention, notwithstanding the fact that there were stopping places in third countries. Both parties being domiciled in Switzerland and the contract having been concluded in Switzerland, Swiss law must therefore apply. According to Swiss law, the carrier cannot contractually exclude his liability for *culpa lata,* and there was *culpa lata* with defendant's representative at Istanbul, because not only was a confusion of different cases impossible without negligence, but his attention had particularly been directed to the special requirements of this transportation. The delay of the case equals to its loss, for which defendant is liable. Judgment entered in favor of plaintiffs in the sum of Sw. frs. 20,000.00 (15,000.00 for work and expenses wasted, 5,000.00 for tort moral and lost chances).

Remarks: The case arose before the Warsaw rules were introduced into Swiss municipal law by the Air Transport Regulations, 1952. The Court's construction of Art. 1, para. 2 of the Convention is in accordance with the leading authorities, and its holding Swiss law to be the proper law of the contract agrees with Airtrafic vs. Transocean (21 J. of Air Law and Commerce 109, 1954) and other cases decided by the Supreme Federal Court of Switzerland. More important however are two other elements of the opinion, because they might hold good under Warsaw rules as well: first, the equation between delay and loss which might open some interesting perspectives in the insurance field, and second, the evaluation of carrier's conduct as *culpa lata* (which as such, before Swiss courts, would release the mechanism of Art. 25 of the Convention). Still, it is submitted that this evaluation is rather extensive and open to some doubts.

DR. WERNER GULDIMANN (Zurich)

FEDERAL REVIEW

REPORT OF AVIATION FACILITIES STUDY GROUP TO THE BUDGET BUREAU, DECEMBER 31, 1955

PART I — CONCLUSIONS AND RECOMMENDATIONS

FIFTY YEARS AGO the sky was virtually uninhabited by man and his inventions. In 50 years the air has become the principal medium for the conduct of offensive and defensive military operations. The growth of the air transportation industry, which has resulted in some of the largest airlines carrying more inter-city passengers than the largest railroads, is well-known. The growth of miscellaneous commercial and private flying — termed "General Aviation" — is not so well appreciated. It is surprising to many, for example, to find that there are more than fifty times as many aircraft engaged in General Aviation as are flown by the U. S. airlines, and that these airplanes fly two and one-half times as many aircraft miles as the airlines fly.

Aircraft are not the only users of the airspace. Other demands on it include artillery and missile ranges, restricted security areas, defense warning zones, TV and radio towers. In brief, the sky above us is being used for a variety of purposes and what goes on in it is destined to affect the lives of every living person.

In the course of our study we have asked many questions relating to the use of the airspace and the adequacy of facilities required for its efficient use. (We think of Aviation Facilities as comprising airports, navigation aids, traffic control devices, and the communications that link them together.) The answers that we have received have convinced us that much of our airspace is already overcrowded and that, in many important areas, the development of airports, navigation aids, and especially our air traffic control system, is lagging far behind both aeronautical development and the needs of our mobile population and of our industry.

Reports presented to us by responsible groups indicate that the risks of mid-air collisions have already reached critical proportions, and that the collision hazard is becoming greater as the increases in civil and military air traffic outpace the capabilities of outmoded traffic control facilities.

This condition is not, apparently, due to lack of scientific knowledge necessary for a solution. The Defense Department is even now proceeding with the installation of a $3 billion air defense radar system which, we are advised, could be adapted to provide the main elements of safe and efficient aircraft separation and traffic control wherever required. The deficiency in our traffic control system is attributable in part, to the fact that aircraft capabilities and public demand for air transportation have proceeded much faster than anticipated. It is also due to the lack of general appreciation of the need for a "systems" approach to our aviation facilities development. Because of this lack of appreciation, the technical knowledge which is available has not been fully utilized and the programs needed to meet our traffic control requirements have not been formulated.

The multimillion dollar leviathans of the air which our aircraft manufacturing industry is creating in the jet age must become integral parts of a transportation system which includes the *airport* complex (with adequate approach areas), the airway (with its traffic control, navigation and instrument landing devices) and the associated *communications* on the ground and in the air. All of the Aviation Facilities mentioned have to be developed concurrently with the development of the aircraft which will use them.

This systems development concept has administrative and fiscal as well as technical aspects. It is necessary, for example, to determine who is to finance the building of the system, who is to pay for its operation, and how its operation is to be administered as well as who is responsible for designing it to serve national as well as local needs.

The evidence is abundant that, in attempting to meet our national Aviation Facilities requirements, we are following a piecemeal rather than a systems approach. The responsibility for meeting the requirements is diffused, the procedures for coordination among those have the responsibility is highly complex and often ineffective.

Against this general background, which is more fully described in the following Sections of this report, we submit our answers to the questions you have asked us:

QUESTION NO. 1. *Should a study of long-range needs for aviation facilities and aids be undertaken?*

Our answer to this question is definitely affirmative. We have analyzed reports on almost every subject related to aviation. While a great deal of thought has been given to Aviation Facilities requirements, it is our considered opinion that there is still no top level *systems* study and master plan which would provide the executive branch and affected agencies of the government with a firm basis upon which to build a comprehensive legislative and fiscal program for Aviation Facilities development. We do not believe that the necessary facts have yet been put together in proper form. We, therefore, conclude that there is a need for a comprehensive study leading to a national plan for the Aviation Facilities of the United States for the next twenty years.

In recommending that a major study to undertaken, we would like to state that we do not regard the study which we recommend as an end in itself, but merely as a necessary prelude or accompaniment to an integrated Aviation Facilities development program which is urgently required in the interest of public safety, military security, and the national economy.

QUESTION NO. 2. *What should be the coverage of such a study, if it should be made, including an indication of the specific areas and subjects which seem to require particular attention?*

We need to know a great deal more about:

1. How to make more efficient use of the national airspace by allocation and traffic control which is safe, efficient, and equitable for all users.
2. How to integrate civil and military expenditures, particularly expenditures for Aviation Facilities research and development.
3. How the cost of facilities should be financed from private and public sources.
4. What kind of government organization is required to control use of the airspace and be responsible for the appropriate Federal interest in the construction and use of government-financed military and civil Aviation Facilities.

QUESTION NO. 3. *How can such a study, if made, best be organized and conducted?*

We conclude that the study which we recommend should be made under the direction of an individual of national reputation, with a broad understanding of civil and military aviation. He should be given a temporary appointment to plan with all departments and

agencies of the executive branch at every level, without being restricted to narrow channels of communications.

The appointment should be made in such a way that it is clearly the appointee's responsibility, backed by Presidental authority, to work through and with existing organizations and avoid duplication of the services which they are able to provide. We are of the opinion that most of the areas requiring intensive study leading to an integrated Aviation Facilities program could under effective central leadership be undertaken in cooperation with the Departments of Commerce and Defense.

In general we feel that the personal qualifications of the individual selected may be more important than the position to which he is assigned in the government; but the two are obviously closely interrelated and we feel strongly that the position should be set up independently of any of the existing operating departments and interdepartmental committees in order to assure objectivity and freedom from deep involvement in day-to-day operating problems.

Unless some urgent action of this nature is taken to provide *full time* high-level leadership to the problem of bringing our Aviation Facilities in line with air traffic growth and the progress being made in aircraft development ever more dangerous conditions in the air can be anticipated.

Finally, it is our considered opinion that the studies which we recommend in our answers to Questions 1 and 2 would very likely be ineffective and wasteful of manhours and expense unless pursued under independent central direction at a high government level as recommended in our reply to Question 3.

WILLIAM BARCLAY HARDING, *Chairman*
GEORGE P. BAKER
FRED M. GLASS
N. E. HALABY
HAROLD R. HARRIS
JEROME LEDERER
T. F. WALKOWICZ
J. GORDON BENNETT

PART II — EXCERPTS

SECTION 1—FUTURE AIRCRAFT PERFORMANCE, PRODUCTIVITY, AND OPERATING COSTS

By T. F. Walkowicz

Any study of requirements for a period of twenty years ahead necessitates some arbitrary projections about the future. A list of the basic assumptions against which the projections in this report have been made are: No global war — continued tension — local incidents; USA vulnerable to enemy attack; U.S. population increasing to about 210-220 million; Gross national product to about $715-740 billion (1955 dollars); Defense expenditures maintained at about $30-40 billion.

Projections and predictions in the field of aeronautics have proved hazardous in the past, for technology is generally moving ahead faster than predicted by the "experts." As late as 1941, for example, jet propulsion was considered impractical by a group of leading American scientists and industrialists when called together to appraise its significance. Yet at that very moment — it was later found — the Germans were already flying a jet propelled airplane.

Four principal factors appear to characterize future aircraft design and performance.

First, aircraft speeds can be expected to increase greatly. Commercial transport operating speeds can be expected to rise from today's 300 miles

per hour to 1,000 miles per hour by the end of the twenty-year period. Military operations in the supersonic ranges will be commonplace.

Second, today's maximum civil operating altitude of about 25,000 feet will be increased to 40,000 or higher, putting jet airliners into the same airspace that is now the province of the military.

Third, civil aircraft will show greatly increased productivity. Productivity is the payload multiplied by the number of miles operable within a given period. For example, one of our latest type transports now in transatlantic service has the capability of carrying about 40,000 passengers both ways between New York and London annually. Each one of the jet transports being ordered for transatlantic use in 1959 and 1960 could produce about three times this volume of annual passenger transportation. By way of comparison, it has been pointed out that each of the new jet transports will have approximately the same annual transatlantic passenger carrying capacity as some of the larger luxury liners in the ocean trade.

Fourth, is the trend toward lower direct operating costs. The direct seat-mile cost of operating passenger aircraft is expected to go down about thirty percent in the twenty-year period. The direct operating ton-mile cost of cargo aircraft is expected to be reduced about 80 percent by 1975. Atomic freighters will probably not be introduced until the end of the twenty-year period and their probable operating cost are still very uncertain.

The progress projected in transport and military aircraft will undoubtedly be reflected in the design of private and business aircraft, thus making them increasingly useful and productive in business and industry.

Helicopters and other vertically rising or steep gradient aircraft are expected to come into greatly increased use during the next twenty years. The operating cost of today's helicopter is 10 to 15 times that of fixed wing aircraft. By the late 1960's, the direct operating cost of helicopters is expected to decline to about 3 times that of fixed-wing aircraft. At these cost levels, helicopters may begin coming into more general use, especially where ground transportation is slow and expensive. It is too early to predict, with any accuracy, when other vertical rising and steep gradient aircraft will be ready to provide safe transportation at reasonable cost.

In summary — future civil and military aircraft will fly much *faster,* at much *higher altitudes,* carrying *greater loads,* and they will do this at significantly *lower* direct operating costs. Furthermore, *vertical rising* and *steep gradient* aircraft will begin in an important way to take their place in the national transportation picture.

SECTION 4 — AIRPORTS

By Fred M. Glass

As the expanding requirements of commerce and defense have caused unprecedented congestion of the airspace and overload airways facilities, demands on airports and terminals have in a great many instances, stretched them to the limits of their capacity.

The airport should be regarded as an integral part of a national Aviation Facilities system, but it is too often evident that airport planning is primarily based on local considerations which, in many instances, are not properly related to national objectives; and that airport design, particularly for future construction is not coordinated with anticipated operating requirements of future aircraft nor with the capacity of the air traffic control system.

There are about 700 *major* civil and military airports. There are over 6,000 additional civil airports (of lesser significance).

The Federal Government's responsibilities for airport development fall

into two broad categories: first, is the field of planning; and second, is the field of financial participation. The orderly development of military and civil airports requires long-range planning — planning of an overall or master plan nature — so that those primarily responsible for the development, financing and management of airports at the local level can have the essential information required.

Cities and local communities should be advised of traffic requirements which their airports should be prepared to meet in 1960, in 1965, and in 1975 so that airports will not become bottlenecks of an improved Aviation Facilities system. They should be provided with continuously revised estimates of plane movements in order that ample terminal facilities and handling space can be provided; the operating characteristics and tire footprint pressures of future aircraft, etc., in order that land acquisition, runway lengths and weight bearing characteristics will be adequate. Plans for nearby military and civil airports should be coordinated in order that runways may be properly located and traffic control procedures properly integrated.

Additional factors, such as the future role of the seaplane in military and commercial operations; characteristics and anticipated volume in urban areas of vertical lift and steep gradient aircraft must be estimated and the forecasts made known to the local airport planner.

The high noise level of jet powered aircraft has created extremely difficult problems in community relations for the military services and will create additional problems of a very serious nature for civilian operators as jet powered aircraft are introduced, unless the designers can find a solution.

The Federal Government, in setting military aircraft procurement specifications, and in the allocation of research and development funds, could, in our opinion, do much more than is being done toward the solution of the noise problem.

The mention of Federal financial participation in a national system of civil airports raises, first, considerations as to the size of the program, and, secondly, how its cost should be allocated between Federal, local government and private interests.

The overall cost of modernizing the nation's airports has been and will continue to be very large. We have been advised that over $3 billion has been spent on military airports in the United States since 1951. During the same period, only $116 million of Federal funds (exclusive of special appropriations such as those for the National Airport in Washington, D. C.) have been invested in civil airports. This amount was spent under the 1946 Federal Airport Act, which authorized a total of $500 million, of which only $212 million has been spent since the Act was passed. The total investment in civil airports, including Federal, local government and private is not known, but construction costs are, in general, borne predominantly by local governments and private interests. Some figures regarding the investment made at the four major airports in the New York metropolitan area are cited to illustrate, in a general way, the magnitude of the expenditures required.

Ninety-two million dollars (exclusive of the purchase price of Teterboro and prior governmental investments in the other three fields) has been invested by the Port of New York Authority in Idlewild, LaGuardia, Newark and Teterboro during the past eight years. The Federal contribution under the 1946 Airport Act was $9 million in addition to this amount. Current plans for the next ten years indicate an additional local expenditure of about $175 million with the requirements beyond 1956 unpredictable on the basis of available data, but in all likelihood involving substantial additional sums. This local expenditure of about $268 million on four airports over

a 15 to 20 year span may be compared with the program Congress recently passed calling for Federal assistance of $251 million over the next four years for all of the nation's civil airports.

The question of how much of the cost of construction of the nation's civil airports should be borne by the Federal Government has been hotly debated for many years. Some objections have been raised to any Federal participation on the grounds that this would constitute unwarranted government assistance to the comercial air carriers.

It must be recognized, we believe, that it has been a traditional government policy to render Federal financial assistance, in one form or another, to almost every type of transportation at some time during its development. This assistance has often been and logically should be withdrawn when without it an industry can produce the required public services and when national security considerations permit. The airlines of the United States have matured as an industry, and with few exceptions, the air carriers should be expected to pay reasonable amounts for services received and facilities utilized. It is impractical, however, except under very special circumstances, for them to build their own airports, install their own navigation aids, or set up their own traffic control facilities. They must, for the most part, share publicly provided facilities with military and many other civil users. The determination of who should pay how much for the use of these facilities can and should proceed simultaneously with the provision of the facilities themselves.

Among the airport improvements which are required are longer and stronger runways, clear approach zones, high-speed taxi turnoffs, high intensity lighting, larger passenger and cargo handling areas, enlarged utility systems — to name but a few. Certain airport deficiencies have been acceptable to date with low performance aircraft, but those now being operated and those shortly to take to the air are far more demanding on the landing facilities provided for them.

A consideration of no small concern from a national defense standpoint which seems to require special note, is the fact that although civil airports should and must provide a reserve for military use in time of emergency to our knowledge, no single civil airport in the country is capable, at the present time, of handling the Air Forces' principal long range bombers at full operational loads on a sustained basis. What this means to the military's ability to disperse its forces in time of emergency is obvious.

In conclusion, then, the responsibility for the financing of individual civil airports and the responsibility for their management and individual planning should remain at the local level. But the Federal Government must accept responsibility for overall planning of a national airport system as part of the national Aviation Facilities concept and for the programming of such additional funds, both direct and supplemental, as may need to be invested in airports in the national interest. Any other course of action could only lead to confusion and wasteful inadequacy.

SECTION 5 — GOVERNMENT ORGANIZATION

By J. Gordon Bennett, Jr.

Prior to 1926 — the infant days of aviation — matters pertaining to navigation aids, communications, and air traffic control were the responsibility of the Bureau of Lighthouses. The Air Commerce Act of 1926 created an Assistant Secretary to help the Secretary of Commerce foster air commerce and designate air routes.

The Air Mail Act of 1934 established a commission to recommend a U. S. aviation policy. The recommendations of this commission contributed

to the Civil Aeronautics Act of 1938 which created an independent agency called the Civil Aeronautics Authority. The Civil Aeronautics Authority was responsible not only for developing, installing, and operating airways and air traffic control facilities, but also for economic and safety regulation and accident investigation.

Under Reorganization Plans III and IV of 1940, President Roosevelt divided the Civil Aeronautics Authority — keeping the adjudicating, economic, and accident investigation functions, and the promulgation of broad safety regluations under what we now know as the Civil Aeronautics Board. He placed airports, safety enforcement, airways, communications, and air traffic control under the Civil Aeronautics Administration. He then put the Civil Aeronautics Administration within the Department of Commerce, where it remains today.

From 1938 to 1946 there was a massive expansion and technical growth of aviation, domestic and international, civil and military. Aviation thus spread out into many new areas of our governmental structure. In order to have a coordinated government policy on both domestic and international aviation, the President in 1946 established the Air Coordinating Committee. The mission of the Air Coordinating Committee was to examine aviation problems and developments affecting more than one participating agency and to develop and recommend integrated policies.

As post-war civil and military air traffic increased, delays caused by inadequate air navigation and traffic control facilities increased. To meet their individual needs, civil and military agencies were developing separate devices for air navigation and traffic control. In 1947 the need for development of a single or "common system" was recognized and an industry-government advisory organization, founded in 1935, and known as the Radio Technical Commission for Aeronautics, drew up the basic requirements of such a system.

In order to keep the civil and military agencies coordinated in the implementation of this long-range effort, the Air Navigation Development Board was created in 1948. The Air Navigation Development Board was charged with preparing a single budget for all *research and development* required in connection with the common system, and neither the civil nor the military agencies were to begin or maintain any research and development without the express authorization of the Board.

In summary then, the present responsibility for Aviation Facilities development, within the Government, is distributed somewhat as follows:

> The Civil Aeronautics Administration has the responsibility for operating the airways.
>
> The military services fly under Civil Aeronautics Administration's control but must, of necessity, provide certain traffic control and air navigation services to meet their own requirements, if the Civil Aeronautics Administration is unable to meet them.
>
> The Air Coordinating Committee has the responsibility for coordinating board aviation policies.
>
> The Air Navigation Development Board is responsible for coordinating Aviation Facilities development programs.
>
> The Radio Technical Commission for Aeronautics is a government-industry advisory organization with no continuing official government status; which serves upon request.

There are now over 75 committees, subcommittees, and special working groups addressing themselves to Aviation Facilities matters. The existence of so many groups is not, in itself, an evil, but it is increasingly apparent that the process of coordination is becoming more and more time consuming, and that preoccupation with current issues tends to obscure forward vision.

SECTION 6 — THE ORGANIZATION OF A STUDY LEADING TO A PLAN FOR A NATIONAL AVIATION FACILITIES SYSTEM

By N. E. Halaby

It is clear that a great deal of effort has been made to coordinate the activities of various government departments and agencies in the development and operation of Aviation Facilities. But it is also clear that the development of the required facilities is lagging far behind the needs of aviation. It seems appropriate to re-examine the organizational structure of the government for handling the planning, programming, and development of a national Aviation Facilities system.

We find that none of the interdepartmental committees dealing with coordination has any independent executive authority. Their members serve only on a part-time basis and the membership changes frequently. While it was originally intended that, in addition to exercising their coordinating functions, they would be instrumentalities for the development of forward looking policies, they have, in practice, become primarily mechanisms wherein the representatives of various Federal agencies meet to debate and, whenever possible, coordinate action on pressing current problems. Furthermore, the coordination *among* the committees themselves has become a problem, and the delineation of their respective functions is not always clear.

It is not our desire to belittle the useful functions which these organizations perform, but we do wish to note their practical limitations. We think it is abundantly clear that, because of their basic structure, they cannot be expected to provide the dynamic leadership required for *origination* and development of a comprehensive national Aviation Facilities system. Certain essential elements of effective government action seem to be missing — full time direction, full disclosure of departmental information and plans, closely coordinated budgetary planning and funding, and a unified approach to the Congress in matters of appropriations.

Most of the reports which come out of these committees appear to be statements of requirements, which may be excellent in themselves; but these requirements require budgetary support and authoritative decision and assignment of necessary resources before they can become programs ready to be put into action.

A recent report of Special Working Group No. 13 of the Air Coordinating Committee, entitled "Aids to Air Navigation and Landing," contains two statements which illustrate the problem:

> "It has been concluded that 'research and development programs have been severely handicapped for lack of continued participation of operational planning groups.' Such groups 'after writing reports and recommendations, disbanded and their sponsoring agencies did not continue to review progress and keep operational requirements up to date.'
>
> "There has been insufficient recognition of air traffic control requirements from a budgetary standpoint. Not only is strong budgetary support needed for the immediate needs of the air traffic control system, but strong support is needed for a proper research and development program for air traffic control. This is essential because it is impossible to imagine that any air traffic control system will in itself become *the* ultimate. Keeping pace with the rapid advancements in aircraft design will actually result in a series of so-called 'ultimate' systems which through evolution will in themselves become interim transitions to a better system."

It seems evident that there is a need for forceful, high level direction of the studies leading to a national Aviation Facilities program. Inasmuch as the regular departments of the government are fully occupied with heavy operating responsibilities which are diverse and sometimes conflicting, and as the interdepartmental committees are fully occupied in resolving day-to-day conflicts, it seems logical to conclude, as we have done, that the direction of the study necessary for intelligent future planning should be established elsewhere in the government.

It is our conclusion that the study should be undertaken within the framework of the executive branch and should be headed by an individual serving under a temporary appointment in the Executive Office of the President.

The personal qualifications of the individual selected for this assignment are of paramount importance, in our opinion. He will have to exercise a high degree of leadership in dealing with the disputes which will inevitably arise as a result of the varying objectives of the users of our airspace. The Armed Forces, for example, aggressively strive for optimum combat performance other considerations being secondary. The airlines put safety and economy ahead of maximum performance. The owners and operators of small private and miscellaneous commercial aircraft are often unable to afford some of the very expensive and heavy equipment that the military, the airlines and large business aircraft operators may be willing to buy, and therefore sometimes find themselves at odds with both the military and the scheduled airlines.

We believe that placing responsibility on an individual is more likely to produce successful results than would be the case if the assignment were made to a board, committee or commission, although we recognize that the individual selected might desire an advisory commission or committee to help him, and may need to enlist the aid of talents available outside of the government.

We believe the urgency of the problem is such that no effort should be spared to find an individual of superior talents and proper background who has the President's confidence and who can work on a basis of mutual trust and respect with those members of the Cabinet most directly concerned.

JUDICIAL AND REGULATORY DECISIONS

ACQUISITION OF LOCAL SERVICE CARRIER BY TRUNKLINE CARRIER

IN the *Continental-Pioneer Acquisition* case,[1] a sharply divided Civil Aeronautics Board approved the first merger of a trunkline carrier and a local service carrier. The dissenters strongly attacked the decision as being an intentional departure from the policy of separation of these carriers constituting a direct threat to the future of the local service industry.[2] While the majority's "exception" rationale is subject to criticism, the decision would not seem to indicate any intentional modification of the local service theory. The effect that the decision will have on the future of the new Continental-Pioneer Airlines and the local service industry in general would seem to turn on whether the Board will consider the new carrier to be a trunkline, a local service carrier, or a new and special class of hybrid.

In the instant case, Continental Air Lines, a regional trunkline carrier operating from Colorado and Kansas throughout the Southwest, and Pioneer Air Lines, a local service carrier operating in Texas and New Mexico, applied to the CAB for approval of an agreement to merge.[3] In spite of the long standing policy of separation of trunkline and local service carriers, the merger was approved.[4] The Board unequivocally denied any intention to depart from its previous policy, stating that the decision was an exception to the policy of separation and was based on the substantial degree of similarity in the operational[5] and economic[6] characteristics of the carriers[7] together with the fact that the other aspects of the transaction were consistent or affirmatively beneficial to the public interest.[8]

In order to evaluate the rationale and significance of the opinion it is

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[1] CCH AVIATION L. REP., 11 21,782 (Dec. 7, 1954); *reconsideration denied* 11 21,811 (Mar. 17, 1955.)

[2] See dissenting opinions of Members Lee and Adams. Dissenters also disagreed on the issues of: 1. improvement in service, 2. purchase price set-off against mail pay, 3. rental allowance in mail pay for leased aircraft, 4. effect on Continental's financial position and 5. elimination of local carrier.

[3] 52 STAT. 937-1030 (1938), 49 U.S.C. §408(a)(2), 412(a), 401(i) (1953).

[4] Approval of a merger is required unless it is inconsistent with the public interest, creates a monopoly, restrains competition, or jeopardizes another carrier. *Supra*, note 3, at §408(b).

[5] *Operational Characteristics*:

	CAL	PAL
Average length of haul	77.4	69.3
Average length of flight	143	100
Average length of passenger journey	395	280

Source: Initial Decision of Thomas L. Wren, Examiner, Served July 15, 1954, Docket #6457, p. 23.

[6] *Financial Ratios*:

	CAL	PAL
Mail revenue per mail ton mile	$2.07	$13.71
Percentage mail rev. of total operating revenues	9.70%	43.02%
Operating cost/revenue ton mile flown	65.55c	101.36c

Source: *Supra*, note 5.

[7] In addition similiar characteristics were found in geographic and size factors and traffic characteristics. *Supra*, note 5.

[8] The Board found that the merger would not result in a monopoly or injure any other carrier; it would result in a rational, integrated and economical route pattern; the labor conditions and purchase price were satisfactory; the affirmative benefits would result in improved service to the public; substantial savings would be obtained through integration and elimination of facilities; reduction in mail pay. *Supra*, note 1.

necessary to consider the theory underlying the local service,[9] from which arises the distinction between trunkline and local service carriers and the policy of separation.

The local service branch of the domestic air transportation system was established after the adoption of the Civil Aeronautics Act at a time when the existing air routes of the country served only relatively large population centers. The carriers performing air transportation then have become, for the most part, the trunklines of today. The local service was intended to extend air transportation to the smaller communities of the nation, and in so doing was to serve a dual purpose. In its "local" aspect[10] it was to offer air transportation among the smaller communities and their large metropolitan centers; in its "feeder" aspect[11] it was to serve in bringing the long-haul trunkline traffic into the major terminals by air. In initiating[12] the local service[13] the Board was faced with two problems: 1) the selection of an appropriate carrier to perform the new service and 2) the adoption of measures to insure the proper operation of the service, and to prevent potential competition.

As to the first problem, the board adopted the policy of favoring independent carriers rather than existing trunkline carriers for the certification of these routes. This decision involved an evaluation of the probability of effective development and successful performance of the service by each class of carrier. Recognizing that an unusually intensive effort would be required to develop this new and admittedly inadequate market, the Board thought that the independent was the better choice because it could devote all of its time to the service and would be dependent solely upon it for continued existence.[14] It was believed that the trunkline would probably not expend the necessary effort because of its long-haul commitments, and that if it did attempt to perform the service it would jeopardize its development of long-haul traffic and indirectly its attainment of self-sufficiency.[15] Moreover, it was thought that through necessity or design, the trunkline might neglect the local service for the more profitable long-haul service, or concentrate on only the more profitable segments of the local routes.[16]

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[9] For detailed history and development of the local-feeder experiment see, Zook, *Certification of Local and Feeder Air Carriers*, 7 Sw.L.J. 185 (1953); Grunder, *Experimental Certificates Under the Civil Aeronautics Act*, 17 J. Air L. 236 (1950); Ray, *The Feeder Airline Story*, 16 J. Air L. 379 (1949).

[10] For discussion of this aspect see, 1950 Report of American Bar Association Standing Committee on Aeronautical Law, 17 J. Air L. 467 (1950).

[11] See, B. E. Cole, *Feeder Air Routes*, 11 J. Air L. 17 (1940) for discussion stressing this aspect.

[12] The CAB originally authorized experimentation with one route in order to study the results of the proposed service. Continental Air Lines, Inc., Texas Air Service, 4 CAB 478 (1943). The following year it approved the concept. Investigation of Local, Feeder, and Pick-up Air Service, 6 CAB 1 (1944).

[13] The Board found its authority for establishing the service under §401(a) of the C.A.A., and its duty to regulate the new service under §401(b) of the act. *Supra*, note 3.

[14] "Greater effort and the exercise of managerial ingenuity may be expected from an independent local operator whose continuation in the air transportation business will be dependent upon the successful development of traffic . . . and the operation of the service on an adequate economical basis." Service in the Rocky Mountain States Area, 6 CAB 695, 736-7.(1946); See also, West Coast Case, 6 CAB 961 (1946).

[15] "While recognizing that existing scheduled carriers could provide service to additional cities through amendment of their certificates, we do not believe that it is in the public interest for a trunkline carrier to handicap the direct fast service which its long-haul passengers require by attempting to fulfill functions peculiarly adapted to a feeder operation. Texas-Oklahoma Case, 7 CAB 481, 495 (1946).

[16] See: Florida Case, 6 CAB 765, 786 (1946); Wisconsin Central Renewal Case, Order Ser. No. E-5951 (1951); Reopened Additional California-Nevada Service Case, Order Ser. No. E-6040 (1952).

Another factor favoring the independent was their interest and experience in the areas which would result in a more intimate knowledge of the area and its transportation needs.[17] Finally, with respect to the "feeder" aspect of the service, the Board desired all trunklines to derive benefit and an equal opportunity to obtain the traffic destined for further long-haul transportation, and thought that a trunkline performing the local service might be inclined to discriminate in favor of itself in obtaining this traffic.[18]

The second problem arose after and as a consequence of the decision to favor independents for the local service. The CAB recognized that the local carriers would be able to operate as trunklines by the simple expedient of skipping the intermediate stops between major terminals. This would not only defeat the purpose of providing local service, but would also constitute a competitive threat to the trunklines.[19] The Board resolved this problem by imposing certain restrictions on the local service carriers. The condition was imposed in their certification that they serve each intermediate point and each terminal point on each schedule operated.[20] In addition, the local was directed to concentrate on developing the traffic at intermediate points and not to attempt to eliminate or minimize the elapsed time between terminals.[21] Finally the Board has generally required the local carrier to use DC-3 equipment in performing its operations.[22]

Thus it is apparent that there are two basic distinctions between a trunkline carrier and a local service carrier. The first lies in the physical characteristics of its routes and the city populations served, and the second, in the operational restrictions which are imposed upon the local carrier.

With few exceptions, the Board has followed a strict policy of separation of these two classes of carriers. While the general purpose underlying the policy is to insure the operation of each type of service by the appropriate carrier, the policy necessarily embodies all of the considerations underlying the local service theory[23] from which the distinctions between the classes arose.

In the instant case, the majority found that unique similarity in the operational and economic characteristics of a trunkline carrier and local service carrier warranted exception to the policy of separation. In other words, the Board reasoned that since Continental was not a clear cut trunk-

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[17] "In establishing local feeder service it is our policy to authorize operations by local companies whose interests are centered in the area in which they will provide service." West Coast Case, 6 CAB 961, 996 (1946). In the case of an organized independent the Board considered its established good will in the area as an inducing factor. See, Middle Atlantic Area Case, 9 CAB 131, 178 (1948).

[18] Investigation of Local, Feeder, and Pick-up Air Service. *Supra* note 12.

[19] *Supra*, note 18.

[20] Continental Air Lines, Inc., Texas Air Service, 4 CAB 478 (1943). The CAB has modified these conditions under certain circumstances. See, Poineer Air Lines, Inc., Amendment, 7 CAB 469 (1946); Middle Atlantic Area Case, 10 CAB 41 (1949).

[21] *Supra*, note 20 at 485.

[22] While the CAB does not expressly require the use of DC-3 equipment, this is achieved through authorization for mail pay, which is withheld if an economical aircraft is not operated. Pioneer Air Lines, Mail Rate, Order Serial No. E-7225, 13 Mar. 1953. For recent exception however, see Southwest Airways Co., Mail Rate, Order Serial No. E-8757, 10 Nov. 1954.

[23] In the instant case the dissenters contend that one of the reasons for maintaining the separation is as a concession to the trunklines for their co-operation in surrendering segments of their routes in aid of the local feeder experiment. The assertion does not seem to be substantiated by the cited authority, Bonanza-TWA Route Transfer, 10 CAB 895 (1949). For a contra view on the issue of trunkline co-operation see, Netterville, *Local Service Airlines: Trunkline Suspensions in Aid of the Local Service Experiment*, 26 So. Calif. L. Rev. 229 (1953).

line carrier[24] and Pioneer not a clear cut local service carrier,[25] and further since the carriers had such uniquely similar characteristics, the policy of separation was not applicable. It is submitted that the fallacy in the Board's reasoning lies in its assumption that the distinction between a trunkline carrier and a local service carrier lies in operational and economic characteristics. In so far as these factors are affected by physical route characteristics and structure they do bear on the distinction between the two classes, but this is not the only distinction between the trunkline and local carrier. In making this assumption the factor of operational restrictions is overlooked, and this factor constitutes as significant a distinction between the classes as basic route structure. In ignoring this factor, which is an integral part of the local service theory and the policy of separation, the soundness of the Board's conclusion that an exception to the policy of separation was warranted is subject to question.

Apart from any technical departure from policy, the Board's rationale in the instant case also subjects its findings of public interest to question. Having concluded that the carriers were *similar*, the Board treated the case as it would any other merger,[26] considering whether it would: (1) result in an integrated, rational and economical route pattern, (2) suppress competition and injure another carrier, (3) involve a satisfactory transfer price and (4) protect the interests of labor, but the Board did not consider the effect of retaining the local carrier restrictions on the old Pioneer routes.[27] This failure is understandable in view of the rationale of the decision, but adherence to Board policy would seem to have required consideration of the following additional factors: (1) the losses which may be sustained through presumptively less efficient operations of the Continental trunkline routes, (2) the effect of reducing the average length of haul of routes, (3) the competitive effect of discriminative "feeding" and (4) benefits derived from discriminative "feeding." With respect to the first point, the decision announces that the old Continental routes were very similar to the old Pioneer routes, but yet the latter will be operated under local service restrictions. Underlying the policy of favoring the independent for local service routes is the presumption that a trunkline will jeopardize its long-haul operations by attempting to perform both trunkline and local service operations. Continental does have some long-haul routes, and those routes which are relatively short could be operated on a non-stop trunkline basis. In this case, with the economic condition of Continental far from

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[24] Continental had 8 round-trips that should be classified as trunkline-type service. The average length per hop on these flights is 358 miles. It has 11 round-trip flights with an overall average length per hop of 97 miles. This compares with the average length per hop of 82 miles for Pioneer's 10 round-trip local service flights. "Bureau Counsel asserts that Continental is more nearly akin to the larger local service carriers than to a trunkline carrier. He points out that in 1953 Continental's revenue plane miles exceeded the average of the 3 largest feederlines by 68% while the next largest trunkline's average exceeded Continental's total by 116%." *Supra*, note 5 at 24.

[25] The average length of haul and city population served exceeded the average of the local service carrier. *Supra*, note 5.

[26] These have been the factors considered by the Board in all cases of proposed mergers. See in general, Zook, *Recasting Air Route Pattern by Airline* Consolidation and Mergers, 21 J. Air L. 293 (1954).

[27] The implication from the instant case is that the old Pioneer routes will continue to be operated under local service restrictions. The diversionary effect evidence of Trans-Texas and Central was considered irrelevant because based on anticipated changes in Pioneer's operations. Also, the justification for allowing Continental access to the Dallas-Fort Worth market after having refused it in the Wichita Falls-Dallas case was that Continental was now operating it on a local service basis.

favorable,[28] the possibility of losses in the trunkline routes should be a major consideration. Secondly, since long-haul operations are more profitable than short it seems that Continental is apt to sustain further losses through the reduction in overall average length of haul caused by the merger.[28a] Third, another reason for favoring the operation of local routes by independents was to preclude the possibility of discriminate "feeding." With Continental operating the local service route, it will obviously route the further trunkline traffic over its own system. This factor should be considered in relation to the issue of the competitive impact of the merger on other carriers.[29] Fourth, while discriminative "feeding" will take place, it will have a beneficial effect on the trunkline segments and may offset, through increased traffic density, any losses occasioned by presumptive losses considered in 1 and 2 above. If the reasons for the Board's original local service theory had basis in fact, the criticism of the majority's decision in the instant case is that it overlooks pertinent factors bearing on the public interest.[30] It may well be that under the particular facts of this case these considerations are negligible or cancel themselves out, but the fact remains that they should have been considered in reaching a reliable determination on public interest.

Accepting the majority's finding that the merger was in the public interest, the decision can be criticized for its failure to anticipate the problems which it raises and their possible effect on the future of Continental-Pioneer and the local service industry in general. In effect, the majority decision has created a hybrid — a carrier whose route structure and operational characteristics are so "unique" as to warrant its performance as both a trunkline and local service carrier. This involves an immediate effect on Continental-Pioneer because of the consequences of classification. While the Board may be creating an artificial distinction between trunkline and local service carriers through the imposition of operational restrictions on the local service carriers, the fact remains that these restrictions exist and will have to be reckoned with. The local service carriers are required to make all stops on their routes — the trunklines need not; the local carriers are directed not to minimize the elapsed time between terminals — the trunklines are encouraged to minimize these periods; the local carriers have been limited to the use of DC-3 equipment — the trunklines have no restrictions on equipment. Being a hybrid carrier, will Continental-Pioneer be eligible in the future for a clear-cut trunkline or a clear-cut local service route extension, or will it be limited to those routes which are consistent with its present "unique" structure? If a new route is granted what type

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[28] "The inability of Continental to attain self-sufficiency despite the currently high level of earnings prevailing throughout virtually the entire domestic trunkline industry may be an impediment to the development of the sound air transportation system envisaged by Congress in the Civil Aeronautics Act." Continental Air Lines, Inc. and Pioneer Air Lines, Inc., Order Serial No. E-7977, 17 Dec. 1953.

[28a] Operating Results, Calendar 1954

	CAL	PAL
Traffic Density—Rev. Ton-Miles:		
Per route mile per Day	16.6	8.5
Per Station per Day	1267.0	583.0
Length of Passenger Haul (miles)	401	277

Source: Dissenting Opinion Member Adams

[29] While the Board did not consider the discriminative "feeding" issue as such it did consider diversion which it estimated at a total of $103,401. Also it noted that only 3 carriers requiring subsidies would be effected—Braniff, Trans-Texan and Central. *Supra*, note 5 at 26 and 54.

[30] There have only been two instances of exception to the local service theory in the past where trunklines were permitted to operate local routes and both had unfavorable results. Great Lakes Area Case, 8 CAB 360, (1947); Parks Investigation Case, 11 CAB 779 (1950).

of equipment will be authorized for its operation? Will the decision turn on whether the new route is a logical extension of an existing trunkline or local service route? If the logical extension criterion is adopted then the carrier will be moving toward one classification, and as soon as this occurs the basis for the exception of the case is destroyed, for no longer are its characteristics so "unique" as to justify both trunkline and local service operations by the same carrier. When the carrier begins to take on the characteristics of either a trunk or local will it be required to surrender its other class routes? It would seem that the only way it can retain its present status as a hybrid is by keeping its present structure constant. To stunt the future development of the carrier by not allowing any change would obviously neither be in the carrier's nor public's interest. The alternate solution to allowing growth without destroying the peculiar characteristics of the carrier, would be through the authorization of only special "hybrid-type" routes or the granting of a compensatory local service route whenever a trunkline route is granted.

The effect of this decision on the future of the local service industry would seem to turn on the manner in which the Board treats Continental-Pioneer. Assuming the Board will continue to adhere to its local service theory it would seem that it will have to treat Continental-Pioneer as a trunkline or local service carrier temporarily, or attempt to create a new and special class of hybrid carrier. The most undesirable position for the Board to take would be to continue to treat the new carrier as a hybrid allowing unrestricted growth toward trunk or local service carrier overlooking the theoretical conflict of the local service theory. The trunklines have always been concerned with the potential threat of the local growing into another competitive trunkline and the decision here would seem to offer the precedent for a particular trunkline eliminating the threat of a potentially competing local carrier through merger. The Board's criterion for such a merger is "similarity of economic and operational[31] characteristics" plus affirmative benefits.[32] It would seem that a merger of any trunk and local carrier operating in the same general region with some common cities would result in savings and economies through integration and elimination of duplicative facilities. This would leave only the "similarity" factor to be contended with. Since most of the trunklines have some local carrier characteristics perhaps the elimination of some segment along the trunk route would bring about operational and economic characteristics sufficiently similar to meet the standard of this case. Then too, since there is no definite standard of how similar the carriers have to be in order to warrant the doctrine of the instant case, perhaps the economic benefits of a particular merger might subordinate the similarity factor. Any sacrifice which would be made by a trunk initially would seem to be outweighed by the advantages of eliminating a local service carrier and achieving the coveted position of hybrid — which allows optional development as either a trunkline or local service carrier and the advantages of discriminative "feeding."

It seems certain that the Board will have to define the status of Continental-Pioneer in the near future. As a possible solution, it is submitted that the most reasonable position for the Board to take is to treat the carrier temporarily as either a basic trunkline or local service carrier, allowing changes to be made on the basis of a "logical extension of an existing route" test. When the hybrid carrier begins to move toward one classification or the other it should be required to surrender the other class of

[31] *Supra* notes 5, 6 and 7.

[32] *Supra* note 8.

routes. While this may conceivably create some problems in the future,[33] and it would seem should have been provided for as a condition in the approval of the merger, it would seem more favorable than attempting to create and maintain a special classification of hybrid.

Northwest Airlines Inc. et al. v. Glenn L. Martin Company
3 Avi. 17,683

Facts: The facts of this case were as follows: Northwest Airlines Inc., hereinafter referred to as "Northwest," purchased from Glenn L. Martin Company, hereinafter referred to as "Martin," a number of "Model 202" aircraft designed and manufactured by Martin. After these aircraft had flown approximately five per cent of their expected service life a structural defect resulted in the total destruction of one of the aircraft with all persons aboard and the grounding of all Models 202 for the required structural changes. It was shown conclusively that the defective part was a joint in the front spar of the wings. This defect was caused by what is known as metal fatigue which is governed by the type of metal, its configuration and surface condition and the amount of repeated load as related to the strength of the material for one load. The agreement covering the purchase of the aircraft in effect limited Martin's liability to that "imposed on it by law for its negligence."

The Trial Court heard Northwest's claim for damages resulting from the loss of the crashed aircraft and the loss of use of certain other aircraft while the structural fault was being eliminated. This claim was based on certain allegations of misfeasance and nonfeasance by Martin amounting to negligence in the design and manufacture of the aircraft. Martin's defense was that it had used great care but that if negligence was found then Northwest had assumed the risk or had been guilty of contributory negligence. These alternate defense pleas were based on the opportunity Northwest had to inspect the aircraft in the process of production, Martin arguing that the difference between assumption of risk and contributory negligence as delineated in the cases was merely one of degree—between risks so obvious they must be taken to have been known to the plaintiff and those slightly less obvious which the plaintiff might have discovered by the exercise of ordinary care. Martin also alleged contributory negligence by Northwest for not installing airborne radar which might have prevented the accident. The jury returned general verdicts in favor of Martin.

Northwest appealed on the following grounds:

1. That the Trial Court should have found Martin negligent as a matter of law and therefore that the question of negligence should not have been submitted to the jury. 2. That the Trial Court was in error in submitting to the jury the issue as to whether Northwest was barred from recovery because of its assumption of risk as there was no evidence to support such a contention. 3. That for the same reason the issue of contributory negligence by Northwest should not have been submitted to the jury, either with respect to Northwest's failure to observe the defect or to install radar in its aircraft.

The Appeal Court held that the question of lack of ordinary care by Martin was certainly sufficiently doubtful to warrant its submission to the jury. On the second plea raised by Northwest it held, with one judge dissenting, that as there was a complete absence of evidence that Northwest

[33] Apart from possible objections on the part of the carrier to surrendering routes there would be the legal question of whether a suspension would be warranted under the Act. *Supra*, note 3 at §401(h).

had knowledge or apprehension of any risk associated with the design, material, workmanship or tests of the aircraft, the question of assumption of risk should not have been submitted to the jury. On the third plea the Court held, again with one dissension, that the question of contributory negligence should not have been submitted to the jury as there was no evidence to support it, finding that it is not contributory negligence to fail to look out for danger when there is no reason to apprehend any. (p. 17687.) The Court was similarly divided with respect to the furnishing of radar, the majority holding that the failure to do so by Northwest was not evidence of negligence under the circumstances prevailing at the time. The case was then remanded to the District Court for a new trial.

Although the facts surrounding this case will be the criterion by which liability will be ultimately determined at the re-trial, the Appeal Court made two findings of interest to the aviation industry. The first was that to find an assumption of risk by Northwest it would have to be shown that the airline "had voluntarily, knowingly and intelligently, assumed the risk of that danger, or that the danger was so obvious that Northwest must be taken to have done so." (p. 17686) and that the mere presence of Northwest employees at the manufacturer's plant did not establish such a condition by inference. The second was with respect to Martin's contention, no doubt advanced after careful consideration, that at least one of the members of the airline at Martin's plant should have seen and appreciated the danger "in the exercise of ordinary care." To this plea the Court replied: "It is not contributory negligence to fail to look out for danger where there is no reason to apprehend any." (p. 17687) and further found that Martin had not acted or refrained from acting in any way as a result of the opportunity Northwest had had to inspect the construction. The said Court apparently did not consider that prudence would dictate an apprehension of danger being inherent in a newly designed aircraft.

IAN E. MCPHERSON, B.A., LL.B., LL.M.

DIGEST OF RECENT CASES

JURISDICTION OVER FOREIGN AIR CARRIER— SALE OF PASSENGER TICKETS

Kenny v. Alaska Airlines, Inc.
132 F. Supp. 838 (S.D. Cal. June 13, 1955).

The plaintiff, a stockholder of the defendant air carrier, brought suit in a federal court in California to protect and enforce his personal rights incident to stock ownership. As the defendant did not have an office or an agent for the service of process in California, the plaintiff served the Secretary of State as provided by statute. The defendant moved to quash the service of summons and to dismiss the action for lack of jurisdiction over its person; it demonstrated that it was incorporated in the Territory of Alaska and had terminals in Alaska, Washington, and Oregon only. The plaintiff conceded these facts, but supported its claim of jurisdiction on the ground that the defendant was doing business in the state solely because its passenger tickets were sold in California by other air lines and independent ticket agencies. The court, in deciding the ultimate issue of whether this sale of tickets amounted to "doing business" in California and so rendered the defendant amenable to suit there, passed upon several collateral issues which it considered necessary to a proper determination of the case.

As this case was commenced in a federal court under its diversity jurisdiction, the court first faced the problem of whether state or federal law should be applied in determining whether the air line was doing business within the state. The court relied on cases interpreting the Federal Rules of Civil Procedure and the doctrine of *Erie v. Tompkins* in concluding that California law should be followed in determining the question of jurisdiction. The court further held that *for the purposes of this action* the defendant, a foreign corporation, was not doing business in California merely because some of its tickets were sold there by independent contractors and connecting carriers. It added that even though the activity of ticket sales was continuous and systematic, it was nevertheless insubstantial where the action sought a regulation of the internal affairs of the defendant.

WRONGFUL DEATH ACTION — LIMIT OF LIABILITY UNDER WARSAW CONVENTION

Da Costa v. Caribbean International Airways, Inc.
2 CCH Aviation L. Rep. 17,792 (S.D. Fla. June 30, 1955).

In an action for wrongful death resulting from the crash of defendant's airplane, defendant sought to limit its liability to the extent provided in its contract with the deceased. This limitation was the same as that expressed in the Warsaw Convention, and the contract was executed in Jamaica. In a motion to strike this defense, the plaintiff maintained that these contract limitations should not be enforced in a federal court because they were contrary to the public policy of Florida, where the suit was brought. The parties had assumed that the contract limitations were valid in Jamaica. In denying the motion to strike this defense the court stated that the limitation clause as contained in the Warsaw Convention was not contrary to the public policy of Florida because the Convention, as a federal treaty, was incorporated into the law of Florida. The public policy of Florida was not affected because the rights of the parties were created in Jamaica and would be decided according to the law of that forum. The court further stated that although a Florida statute prohibited such a defense, application of this statute would violate the "due process" clause of the Federal Constitution by depriving the defendant of a property right under a contract which was valid where made and where it was to be performed.

CONDEMNATION OF LAND FOR AIRPORT — FEE SIMPLE TITLE — EFFECT OF ABANDONMENT

Jackson v. City of Abilene

281 S.W. 2d 767 (Texas Court of Civil Appeals, June 3, 1955).

Appellant Jackson was the owner in fee of certain lands located near the City of Abilene, Texas. In 1929 the City instituted and successfully concluded condemnation proceedings against this land for the purpose of constructing and maintaining an airport thereon. After a period of active use by the City, the airport was abandoned; the appellant reasserted a claim to these lands, and the City sued to quiet title. The appellant proceeded upon the theory that the City had only acquired an easement in the land, notwithstanding the fact that the court in the condemnation proceeding had decreed a fee simple title in the City. In affirming the decision of the trial court quieting title in favor of the City, the Court of Civil Appeals held that the City had the power under a Texas statute to acquire a fee simple title to these lands. It pointed out that even though the City had not asked for a fee simple title in the condemnation proceedings and the decree in that case had granted such a title, there had been no appeal from this decree. At any rate, the court refused to permit the judgment in the con-

demnation case to be collaterally attacked on the grounds of an insufficiency of the pleadings thereof.

DISCRIMINATION BY AIR CARRIER — LIABILITY FOR DAMAGES UNDER CIVIL AERONAUTICS ACT

Fitzgerald v. Pan American World Airways, Inc.
132 F. Supp. 787 (S.D.N.Y. July 8, 1955).

Plaintiffs sued for damages allegedly sustained when defendant airline denied them permission to travel as passengers on a flight from Honolulu to Sidney, Australia. The complaint stated that the action arose under the Civil Aeronautics Act (§ 404 b prohibiting discrimination); the defendant moved to dismiss this complaint on the theory that relief could not be granted under the Civil Aeronautics Act, and, as diversity of citizenship was absent, the court did not have jurisdiction over the suit. In considering this defense the court pointed out that because the complaint stated a claim under a federal statute, it presented a case within the jurisdiction of a federal court. Although the Civil Aeronautics Act admittedly prohibited discrimination, the court held that the complaint failed to state a claim upon which relief could be granted because the Act had not expressly created a civil liability on the part of the airline. The court agreed with the defendant's contention that the plaintiff's remedy lay in a state court action based on common law tort principles. It was only where common law duties conflicted with federally created rights that the latter took precedence and would permit such an action. No such conflict was found in this case.

WARSAW CONVENTION — VENUE IN DAMAGE SUIT FOR INJURIES CAUSED BY AIRLINE EMPLOYEES NOT CONNECTED WITH PLAINTIFF'S FLIGHT

Scarf v. Trans World Airlines
2 CCH Aviation L. Rep. 17,795 (S.D.N.Y. Sept. 2, 1955).

A TWA passenger was injured in Newfoundland when the ramp upon which he was standing while boarding his refueled plane was moved by the propeller blast from a nearby TWA plane. He brought action in New York; the carrier moved to dismiss the case because of improper venue under the Warsaw Convention. The Warsaw Convention permits an action for damages against a carrier to be brought in one of four places: (1) the domicile of the carrier, (2) its principal place of business, (3) the place of destination, and (4) the place of business where the contract was made. The plaintiff contended that he was not bound by the Convention because the gravamen of his complaint was not the defendant's failure to perform its duty to him as a passenger, but merely its commission of a negligent act. The court interpreted Article 24 of the Convention (action for damages "however founded" can only be brought subject to conditions set out in the Convention) to include the plaintiff's claim and therefore dismissed the suit for failure to comply with venue requirements. The court was not impressed by the fact that the plaintiff would have had a valid claim against TWA had the offending plane been operated by another carrier.

DEATH OF SEAMAN IN AIRPLANE CRASH — RETURN FROM VOYAGE — COURSE OF EMPLOYMENT

McCall v. Overseas Tankship Corporation; Northwest Airlines, Inc.
222 F. 2d 421 (2nd Cir. May 10, 1955).

The widow of a deceased seaman brought action against the defendant employer under the Jones Act, alleging that her husband was killed in the course of his employment by the negligence of the agents or employees of

the defendant. The defendant admitted employing the deceased and other seamen under a contract which furnished transportation back to the port of origin on the completion of a voyage to a foreign port. The seamen were also paid wages for the return travel time. Pursuant to this contractual arrangement the defendant had selected Northwest Airlines as the carrier which would furnish the return transportation. The deceased was killed when his plane crashed on a return flight from Shanghai where he had sailed on one of defendant's ships. The Court affirmed the directed verdict granted by the district judge, stating that the deceased was not in the employ of the defendant when the accident occurred. He had terminated his arrangements with the shipping company when he left the ship; he was under no obligation to accept the proffered transportation home. At any rate, the court noted that the airline was a competent independent contractor and therefore the defendant was not liable for the carrier's negligence.

REVOCATION OF REGISTRATION OF LARGE IRREGULAR AIR CARRIERS — WILFUL VIOLATION OF CIVIL AERONAUTICS ACT

Twentieth Century Airlines, Inc.

CAB Docket No. 6000 1A CCH Aviation L. Rep. 21,848 (CAB July 1, 1955).

The Office of Compliance of the Civil Aeronautics Board instituted compliance proceedings against four large irregular air carriers and certain named individuals alleging wilful violation of the Civil Aeronautics Act and the Board's Economic Regulations. The complaint stated that the named individuals had operated the irregular carriers through various corporations pursuant to a plan to evade the law; the air carriers were organized so as to provide a "regular and frequent air transportation service"; the carriers had accepted tickets which did not comply with the Board's regulations; and they had accepted passengers from ticket agents with whom they had no contractual arrangement. The Board found that the four carriers were in fact managed in such a way as to operate a single regularly scheduled air transportation company. It stated that the carriers had ample notice of the Board's dissatisfaction with their operations, and as they were directly engaged in air transportation, their letters of registration would be revoked under Section 408 e of the Act. The Board rejected the carriers' claim that these violations should be condoned because of the public service they rendered. The fact that the carriers had applications for certification pending did not affect the decision in this case.

IRREGULAR AIR CARRIERS

Large Irregular Air Carrier Investigation

CAB Docket No. 5132, 1 ACCH Aviation L. Rep. 21,879 (CAB Nov. 15, 1955).

A new policy defining the role of irregular air carriers in the air transport system has been adopted by the Civil Aeronautics Board. The new policy has designated these carriers as "supplemental air carriers" and has delineated the activities in which they may engage. These activities include: (1) unlimited charter operations on a plane-load basis for the carriage of passengers and cargo in domestic, overseas, and territorial operations, (2) unlimited charter operations for the carriage of cargo in international operations, (3) limited charter operations for the carriage of passengers in international operations, and (4) individually-ticketed or waybilled operations not to exceed ten trips per month in the same direction between any single pair of points. The Board found that certificated carriers would not

be injured by the new policy and that the public need for specialized service and the needs of national defense warranted the favorable policy which they adopted. Provisions for the termination of authority in cases of insufficient operation were adopted, but the present carriers were given authority to operate pending a determination of the qualifications of individual carriers. The Board concluded by providing for new certificated carriers in the event that the volume of traffic carried by the supplemental carriers exceeded fifteen per cent of the traffic carried by certificated carriers.

FINAL MAIL RATES — "DEFERRED TAX" RESERVE ACCOUNT

Reopened Transatlantic Final Mail Rate Case
CAB Docket No. 1706, 1A CCH Aviation L. Rep. 21,856 (CAB July 28, 1955).

In a proceeding to determine the final mail rates for transatlantic services performed by TWA, the Civil Aeronautics Board held that the cutoff date between the past and future rate periods that had been set was conclusive. The Post Office had maintained that the date should be moved forward in order to permit an offset of TWA's domestic division profits against its international division subsidy. The Board also held that TWA could not accrue "emergency facility" depreciation amounts on its books as an expense because to permit this would in effect amount to a granting of a subsidy for the future—an act inconsistent with the determination that the carrier had reached self-sufficiency. TWA had listed these depreciation amounts as expenses on the theory that they were not tax savings but only deferrals, as the savings would be paid in the future when the emergency equipment was fully depreciated. The Board stated that the government should not be required to subsidize a legal obligation to be incurred at a time when the carrier did not require subsidy.

MOTION TO DISQUALIFY BOARD MEMBER SUBSEQUENT TO DECISION ADVERSE TO PETITIONER

Reopened Transatlantic Final Mail Rate Case
CAB Docket No. 1706, 1 ACCH Aviation L. Rep. 21,875 (CAB Sept. 28, 1955).

Following a decision of the Civil Aeronautics Board adverse to the interests of TWA, the carrier moved to dismiss Chairman Rizley from any participation in the case and also to reverse its former holding. The basis for these motions was the fact that Chairman Rizley was the Solicitor of the Post Office at a time when the case in question was pending before the Board and the Post Office Department was actively participating therein. TWA concluded that the Chairman wrongly participated in a case in which he was previously of counsel. The Board denied both these motions, stating that at the time Chairman Rizley was the Solicitor of the Post Office there was no consideration nor even a notation of the issue which was finally determined in the case. The Board thought that the mere fact that the Chairman was the Solicitor of the Post Office in a case where the issue in question *could have been* raised was not sufficient grounds for disqualification. It further held that TWA had objected to the Chairman's qualifications too late. TWA was not permitted to "gamble" on the outcome of the former case.

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